



CONSUMER SERVICES TECHNICAL
EDUCATION GROUP PRESENTS

R-101

FAST FILL DISPENSER SYSTEM



JOB AID
Part No. 8178501



FORWARD

This Whirlpool Job Aid, “Fast Fill Dispenser System” (Part No. 8178501), provides the technician with information on the operation and service of the Fast Fill Dispenser System. For specific information on the model being serviced, refer to the “Use and Care Guide,” or “Tech Sheet” provided with the refrigerator.

The Wiring Diagrams used in this Job Aid are typical and should be used for training purposes only. Always use the Wiring Diagram supplied with the product when servicing the unit.

GOALS AND OBJECTIVES

The goal of this Job Aid is to provide information that will enable the service technician to properly diagnose malfunctions and repair the Fast Fill Dispenser System.

The objectives of this Job Aid are to:

- Understand and follow proper safety precautions.
- Successfully troubleshoot and diagnose malfunctions.
- Successfully perform necessary repairs.
- Successfully return the Fast Fill Dispenser System to its proper operational status.

WHIRLPOOL CORPORATION assumes no responsibility for any repairs made on our products by anyone other than Authorized Service Technicians.

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— NOTES —

GENERAL SAFETY FIRST

Your safety and the safety of others is very important.

We have provided many important safety messages in this Job Aid and on the appliance. Always read and obey all safety messages.



This is the safety alert symbol.

This symbol alerts you to hazards that can kill or hurt you and others.

All safety messages will follow the safety alert symbol and either the word “DANGER” or “WARNING.” These words mean:

⚠ DANGER

You can be killed or seriously injured if you don’t immediately follow instructions.

⚠ WARNING

You can be killed or seriously injured if you don’t follow instructions.

All safety messages will tell you what the potential hazard is, tell you how to reduce the chance of injury, and tell you what can happen if the instructions are not followed.

MODEL & SERIAL NUMBER DESIGNATIONS

WHIRLPOOL MODEL NUMBER

MODEL NUMBER	G	S	6	N	B	E	X	R	Q	00
PRODUCT GROUP G = WHIRLPOOL GOLD										
PRODUCT IDENTIFICATION S = SXS CONTOUR DOOR F = FORMED DOOR										
CAPACITY/CUBIC FOOT SIZE 6 = 26										
MODEL SERIES N = FAST FILL										
MODEL FEATURES										
MODEL CODE E = ENERGY STAR®										
DOOR SWING X = SxS										
YEAR OF INTRODUCTION R = 2005										
COLOR CODE B = BLACK Q = WHITE ON WHITE S = STAINLESS STEEL Y = GREY/STAINLESS STEEL										
ENGINEERING CHANGE DIGITS (00, 01, 02, 03, ETC.)										

WHIRLPOOL SERIAL NUMBER

SERIAL NUMBER	S	S	21	12345
MANUFACTURING SITE S = Fort Smith, AR				
YEAR OF PRODUCTION S = 2005				
WEEK OF PRODUCTION 21ST WEEK				
PRODUCT SEQUENCE NUMBER				

KITCHENAID MODEL NUMBER

MODEL NUMBER	K	SR	T	25	F	R	WH	00
PRODUCT GROUP K = KITCHENAID								
PRODUCT IDENTIFICATION SR = SxS								
MERCHANDISING SCHEME/SERIES T = CONTOURED DOORS F = FORMED DOORS N = FLAT DOORS								
CAPACITY/CUBIC FOOT SIZE								
MODEL FEATURES								
YEAR OF INTRODUCTION R = 2005								
COLOR CODE BL = BLACK WH = WHITE SS = STAINLESS STEEL								
ENGINEERING CHANGE DIGITS (00, 01, 02, 03, ETC.)								

KITCHENAID SERIAL NUMBER

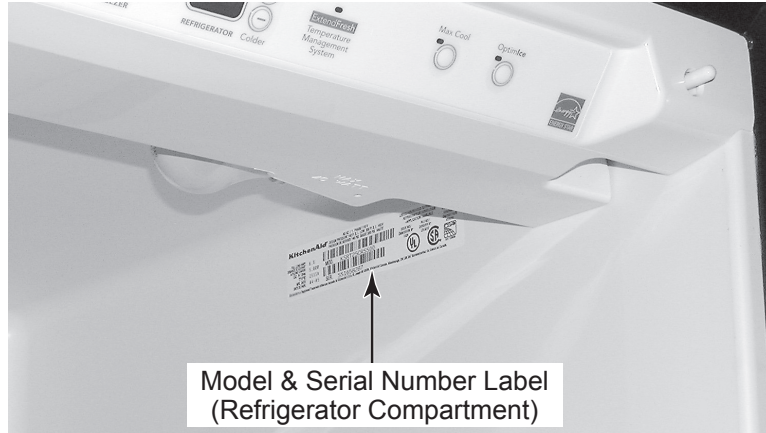
SERIAL NUMBER	S	S	21	12345
MANUFACTURING SITE S = Fort Smith, AR				
YEAR OF PRODUCTION S = 2005				
WEEK OF PRODUCTION 21ST WEEK				
PRODUCT SEQUENCE NUMBER				

MODEL & SERIAL NUMBER LABEL LOCATIONS

WHIRLPOOL MODEL



KITCHENAID MODEL



WHIRLPOOL REFRIGERATOR WARRANTY

ONE-YEAR FULL WARRANTY ON REFRIGERATOR

For one year from the date of purchase, when this refrigerator (excluding the water filter) is operated and maintained according to instructions attached to or furnished with the product, Whirlpool Corporation or Whirlpool Canada LP will pay for FSP® replacement parts and repair labor costs to correct defects in materials or workmanship. Service must be provided by a Whirlpool designated service company.

On models with a water filter: 30 day limited warranty on water filter. For 30 days from the date of purchase, when this filter is operated and maintained according to instructions attached to or furnished with the product, Whirlpool Corporation or Whirlpool Canada LP will pay for replacement parts to correct defects in materials and workmanship.

SECOND THROUGH FIFTH YEAR FULL WARRANTY ON SEALED REFRIGERATION SYSTEM PARTS AS LISTED

In the second through fifth years from the date of purchase, when this refrigerator is operated and maintained according to instructions attached to or furnished with the product, Whirlpool Corporation or Whirlpool Canada LP will pay for FSP® replacement parts and repair labor costs to correct defects in materials or workmanship in the sealed refrigeration system. These parts are: compressor, evaporator, condenser, dryer, and connecting tubing. Service must be provided by a Whirlpool designated service company.

Whirlpool Corporation or Whirlpool Canada LP will not pay for:

1. Service calls to correct the installation of your refrigerator, to instruct you how to use your refrigerator, to replace house fuses or correct house wiring or plumbing, to replace light bulbs, or replacement water filters other than as noted above.
 2. Repairs when your refrigerator is used in other than normal, single-family household use.
 3. Pickup and delivery. Your refrigerator is designed to be repaired in the home.
 4. Damage resulting from accident, alteration, misuse, abuse, fire, flood, improper installation, acts of God, or use of products not approved by Whirlpool Corporation or Whirlpool Canada LP.
 5. Any food loss due to product failure.
 6. Repairs to parts or systems resulting from unauthorized modifications made to the appliance.
 7. Replacement parts or repair labor costs for units operated outside the United States or Canada.
 8. In Canada, travel or transportation expenses for customers who reside in remote areas.
-

WHIRLPOOL CORPORATION OR WHIRLPOOL CANADA LP SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES

Some states or provinces do not allow the exclusion or limitation of incidental or consequential damages, so this exclusion or limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state or province to province.

Outside the 50 United States and Canada, this warranty does not apply. Contact your authorized Whirlpool dealer to determine if another warranty applies.

KITCHENAID REFRIGERATOR WARRANTY

ONE-YEAR LIMITED WARRANTY

For one year from the date of purchase, when this refrigerator (excluding the water filter) is operated and maintained according to instructions attached to or furnished with the product, KitchenAid or KitchenAid Canada will pay for factory specified parts and repair labor costs to correct defects in materials or workmanship. Service must be provided by a KitchenAid designated service company.

On models with a water filter: 30 day limited warranty on water filter. For 30 days from the date of purchase, when this filter is operated and maintained according to instructions attached to or furnished with the product, KitchenAid or KitchenAid Canada will pay for replacement parts to correct defects in materials and workmanship.

SECOND THROUGH FIFTH YEAR FULL WARRANTY ON CAVITY LINER AND SEALED REFRIGERATION SYSTEM PARTS AS LISTED

In the second through fifth years from the date of purchase, when this refrigerator is operated and maintained according to instructions attached to or furnished with the product, KitchenAid or KitchenAid Canada will pay for replacement or repair of the refrigerator/freezer cavity liner (including labor costs) if the part cracks due to defective materials or workmanship. Service must be provided by a KitchenAid designated service company.

Also, in the second through fifth years from the date of purchase, KitchenAid or KitchenAid Canada will pay for factory specified replacement parts and repair labor costs to correct defects in materials or workmanship in the sealed refrigeration system. These parts are: compressor, evaporator, condenser, dryer, and connecting tubing. Service must be performed by a KitchenAid designated service company.

SIXTH THROUGH TENTH YEAR LIMITED WARRANTY ON SEALED REFRIGERATION SYSTEM PARTS AS LISTED

In the sixth through tenth years from date of purchase, when this refrigerator is operated and maintained according to instructions attached to or furnished with the product, KitchenAid or KitchenAid Canada will pay for factory specified replacement parts to correct defects in materials or workmanship in the sealed refrigeration system. These parts are: compressor, evaporator, condenser, dryer, and connecting tubing.

KitchenAid or KitchenAid Canada will not pay for:

1. Service calls to correct the installation of your refrigerator, to instruct you how to use your refrigerator, to replace house fuses or correct house wiring or plumbing, to replace light bulbs, or replacement water filters other than as noted above.
 2. Repairs when your refrigerator is used in other than normal, single-family household use.
 3. Pickup and delivery. Your refrigerator is designed to be repaired in the home.
 4. Damage resulting from accident, alteration, misuse, abuse, fire, flood, improper installation, acts of God, or use of products not approved by KitchenAid or KitchenAid Canada.
 5. Any food loss due to product failure.
 6. Repairs to parts or systems resulting from unauthorized modifications made to the appliance.
 7. Replacement parts or repair labor costs for units operated outside the United States or Canada.
 8. In Canada, travel or transportation expenses for customers who reside in remote areas.
 9. Any labor costs during the limited warranty periods.
-

Disclaimer Of Implied Warranties; Limitation Of Remedies

Implied warranties, including to the extent applicable warranties of merchantability, or fitness for a particular purpose, are excluded to the extent legally permissible. Any implied warranties that may be imposed by law are limited to one year, or the shortest period allowed by law. Some states and provinces do not allow limitations or exclusions on how long an implied warranty of merchantability or fitness lasts, so the above limitations or exclusions may not apply to you.

If this product fails to work as warranted, customer's sole and exclusive remedy shall be repair or replacement according to the terms of this limited warranty.

KitchenAid and KitchenAid Canada do not assume any responsibility for incidental or consequential damages.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state or province to province.

Outside the 50 United States and Canada, this warranty does not apply. Contact your authorized KitchenAid dealer to determine if another warranty applies.

PRODUCT OPERATION

FAST FILL DISPENSER SYSTEM OVERVIEW

FUNCTIONS AND FEATURES

The primary functions of the Fast Fill Dispenser System are:

- Ice dispensing (cubed and crushed)
- Water dispensing (normal fill with feedback and measured fill)
- Water filter indicator
- Dispenser lighting (auto night light)
- Lockout
- Dispenser housing heater operation and power for the ice door. Power (14 volts DC) for a heated ice door is available and may be used as a service fix.
- Monitoring water valve flowmeter to measure water flow to ice maker and dispenser
- Showroom floor mode
- Service Mode Diagnostics

Components

There are three control boards in the Fast Fill Dispenser System. The user interface (touchpad), and the core control are located in the dispenser area of the freezer door. The smart valve control is part of the valve and is located in the unit compartment.

Dispenser Area

The core control is attached to the dispenser housing and controls the dispenser motor, ice door motor, dispenser housing and ice door heaters. The core control also monitors the condition of the freezer door switch and provides the 14 volt DC power supply for the user interface and smart valve. Water and ice can not be dispensed while the freezer door is open.

The user interface provides customer input to the system based on input from the keypad. The user interface drives all the LED indicators and the audio beeper. The user interface powers the white LED lighting and sets the proper amount of lighting during the auto night mode using the photo sensor on the user interface keypad.

The ice and water pad switches are connected electrically to the user interface.

Unit Compartment

The smart valve is mounted to the cabinet. In addition to the dispenser and ice maker water solenoids, it contains a small electronic board and a water flow sensor. The smart valve is used to measure the amount of water for the dispenser and the ice maker.

Ice Dispenser Motor

All Fast Fill Dispenser System models will have IDI, (In-Door Ice). A bridge rectifier on the core control will rectify 120 volts AC to 120 volts DC for the ice dispenser motor. Changing polarity will reverse the motor to change from crush to cube modes. Clockwise (CW) rotation is crush and counterclockwise (CCW) is cube mode.

Ice Door Motor

The ice door is opened and closed by a DC motor driven by a 12 volt DC square wave. When ice dispensing begins, the motor is driven in the CCW direction for approximately one second to open the door. When ice dispensing ends, there is a delay of 10 seconds to allow all ice to clear before the motor is driven CW to close the door. No switches are used to determine the position of the door motor. To insure the ice door is not left open, a request is made to close the door one hour after ice has been dispensed. If a cube had temporarily jammed open the door, this will insure it does not stay open indefinitely. A request to fully open and then close the door is also made immediately when power is applied or restored to the refrigerator.

Ice Door And Housing Heaters

The housing heater is a 120 volt AC, 2.25 watt heater. Service doors for refrigerators with stainless steel door skins will have additional zone heaters to reduce moisture and will be 4.25 watts. A 14 volt DC, 1 watt, heated service ice door will be available. It is powered from P3 on the core board.

Smart Valve

The smart valve is responsible for water dispensing and filling the ice maker. It also monitors total water volume used and accumulated time for the water filter indication. It drives the ice maker valve solenoid and the water dispenser valve solenoid.

120 volts AC will always be present at P1-4 and P1-5 on the smart valve. P1-1 is the AC input from the ice maker to start an ice maker fill request. 120 volts AC for any length of time, signals the valve to fill the ice maker. The valve fills the ice maker by volume, not by time. 14 volts DC will always be present at P2-1 and P2-3.

OPERATION

Water Dispensing

NORMAL FILL

Normal fill is when the customer presses the fill pad or holds the fill button. While water is being dispensed, the flowmeter will measure the water dispensed and display the amount on the user interface.

The following sequence occurs:

1. The user interface supplies 5 volts DC to one side of the water pad switch.
2. The water pad switch is pushed closed.
3. The user interface receives back the 5 volts DC.
4. The user interface signals the core control on P1-2.
5. The core control outputs a data signal to the smart valve.
6. The smart valve then energizes the water valve solenoid with 120 volts AC, and using the flowmeter, sends a signal for the amount of water dispensed, to the user interface display.

MEASURED FILL

Measured fill is where the user interface commands the smart valve to dispense a specific amount of water. The water is measured by the flowmeter in the smart valve. The unit of measure may be changed as desired at any time that you are not dispensing water. Options are ounces, liters and cups. The user interface water switch may be used to start, pause or resume measured fill.

The following sequence occurs:

1. The units of measure are selected.
2. The volume of water requested is entered.
3. The water keypad is pressed or the water dispenser activation pad is held closed.
4. The user interface receives the signal.
5. The user interface signals the smart valve.
6. The smart valve then energizes the water valve solenoid with 120 volts AC, and using the flowmeter, sends a signal for the amount of water as it is dispensed, to the user interface display. When the proper volume has been reached, the smart valve control de-energizes the water valve solenoid.

Ice maker Fill

Using the flowmeter, the valve will fill the appropriate volume of water when requested by the ice maker, 4.4 ounces (130 ml) of water for 8 cube ice makers, and 2.9 ounces (86 ml) of water for 5 cube ice makers. It is important to note that because the ice maker is not time-filled, it may take more or less time than the 7.5 seconds to fill. After receiving the 120 volt AC signal from the ice maker, the smart valve will fill the ice maker.

The flowmeter is used for both the ice maker and the water dispenser with the water dispenser having priority over the ice maker fill. If the water dispenser is operated during an ice maker fill, the ice maker fill will be paused until the dispenser operation has been completed. The smart valve will hold the partial ice maker fill volume in memory, and completes the fill when the flowmeter is available.

Ice Dispensing

IDI ice dispensing is the same as in Side-By-Side IDI electronic dispensers, with the addition of an ice door that is powered open and closed by an electric motor. When the dispenser pad is depressed, the user interface commands the core control to dispense ice, based on the cube/crushed keypad selection.

The core control directs 120 volts AC through the PTC in the IDI motor, and back to the core control. The core control rectifies the 120 volts AC, and 120 volts DC is sent back out on the BR/WH and RD/WH wires. The polarity determines the direction that the motor will run. RD/WH wires will be positive for crushed ice, and will run clockwise. The BR/WH wires will be positive for cubed ice, and will run counterclockwise.

The following sequence occurs:

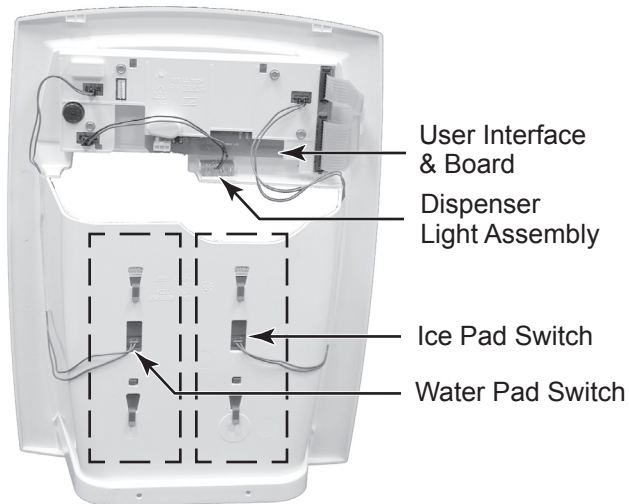
1. The ice pad switch is pushed closed.
2. The user interface receives the signal.
3. The user interface signals the core control on P1-2 which direction to run the auger.
4. The core control outputs the square wave to the ice door motor for approximately 1 second, and at the same time, the IDI motor is energized on P2-1 and P2-2 with 120 volts DC.
5. When dispensing has stopped, the ice door will remain open for 10 seconds, and then power is applied for approximately 1 second to close the door.

COMPONENT ACCESS

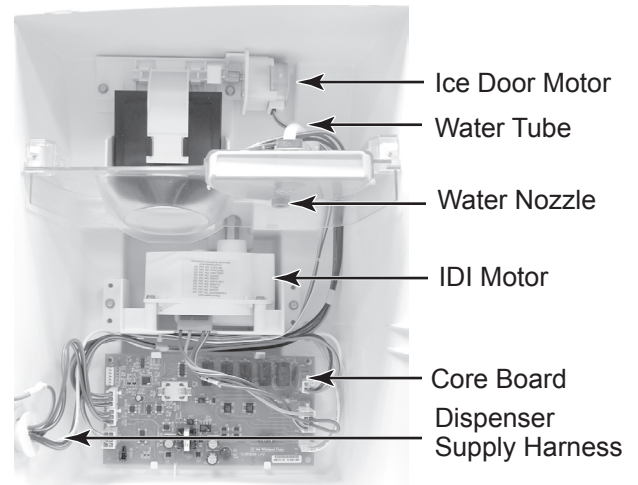
This section instructs you on how to service the Fast Fill Dispenser System in the Side-By-Side Refrigerator. The components and their locations are shown below.

COMPONENT LOCATIONS

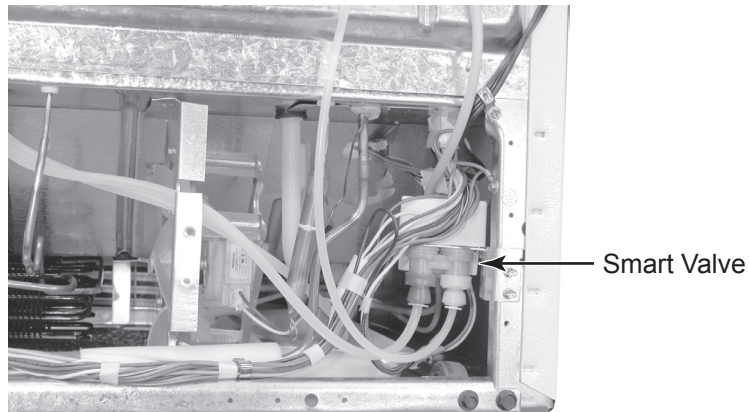
Dispenser Cover Assembly



Dispenser



Unit Compartment



REMOVING THE WATER AND ICE DISPENSER COMPONENTS

⚠ WARNING



Electrical Shock Hazard

Disconnect power before servicing.

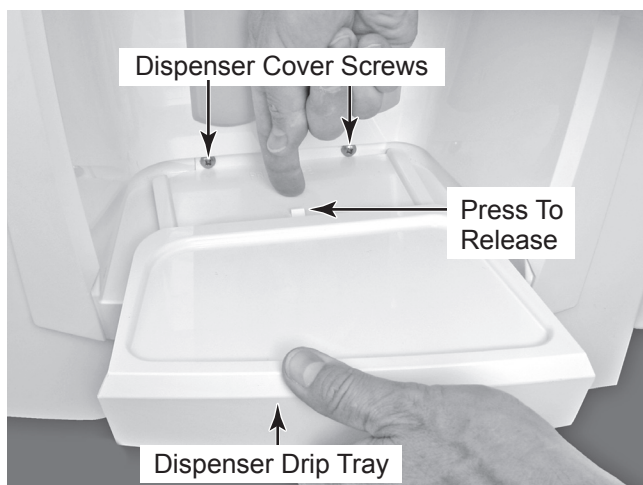
Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

NOTE: The water and ice dispenser components are listed as follows:

- Ice Door Motor
- Core Board
- Pad Switches
- User Interface Board
- User Interface (touchpad)
- Dispenser Light Assembly
- IDI Motor
- Water Dispenser Nozzle

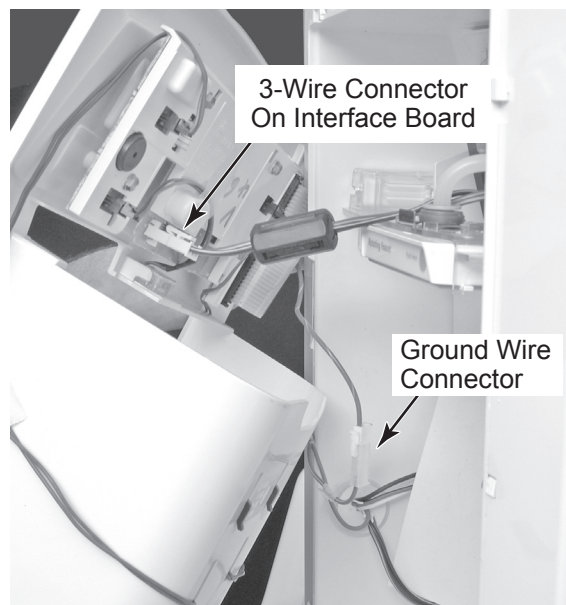
1. Unplug refrigerator or disconnect power.
2. Pull the dispenser drip tray out as far as it will go, then press down to release the catch, pull the tray out all the way and remove it from the dispenser.
3. Remove the two screws from the dispenser cover assembly.



4. Pull out at the bottom, lift up on the dispenser cover assembly, and remove the assembly from the refrigerator door.

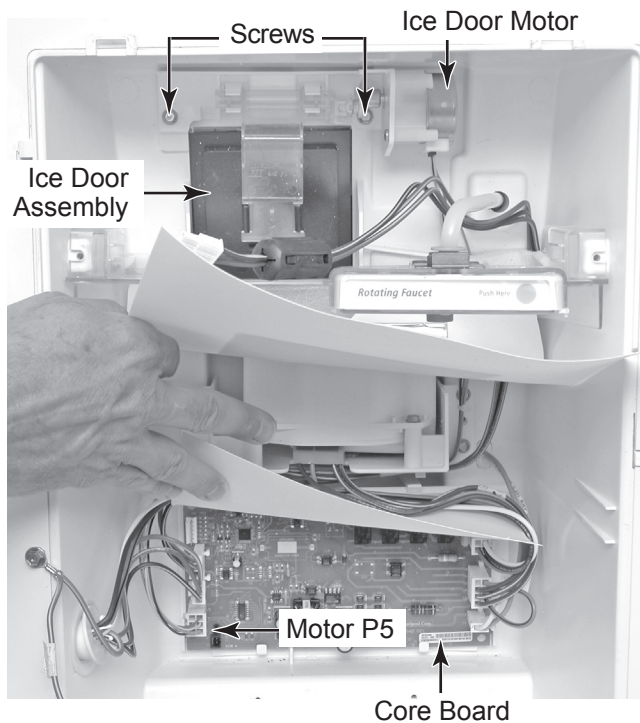


5. Disconnect the dispenser cover 3-wire connector from the user interface board, and the ground wire connector from the ground wire harness.

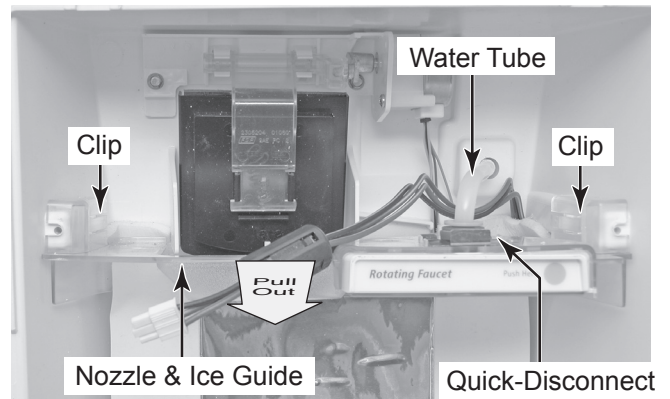


6. To remove the ice door motor:

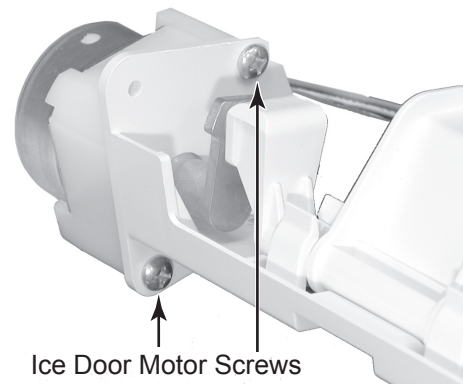
- a) Remove the two screws from the ice door assembly, and remove the assembly from its housing.
- b) Disconnect the motor wire connector from the core board at P5.



- c) Pull the water tube from the quick-disconnect (see the top right photo).
- d) Release the two clips, and pull the nozzle & ice guide out just far enough to remove the motor wire and connector, then remove the ice door assembly from the dispenser.



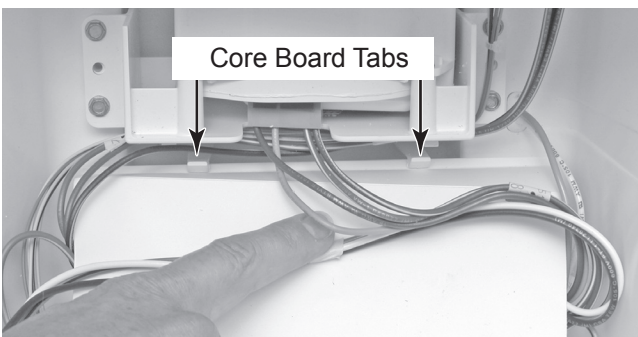
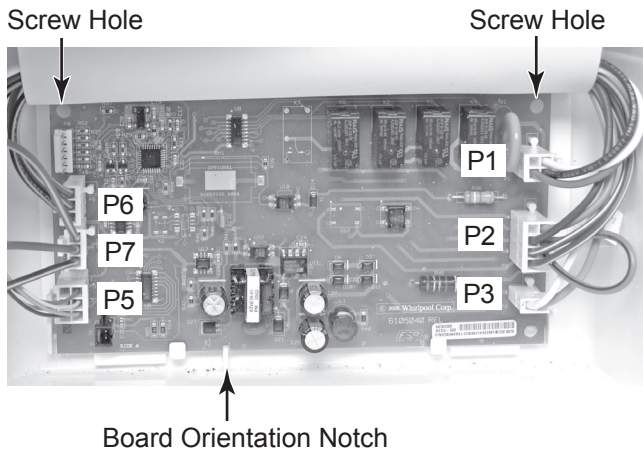
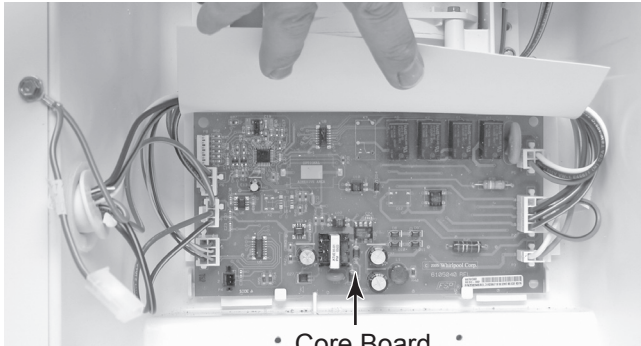
- e) Remove the two screws from the motor and remove the motor from the ice door assembly housing.



Continued on the next page.

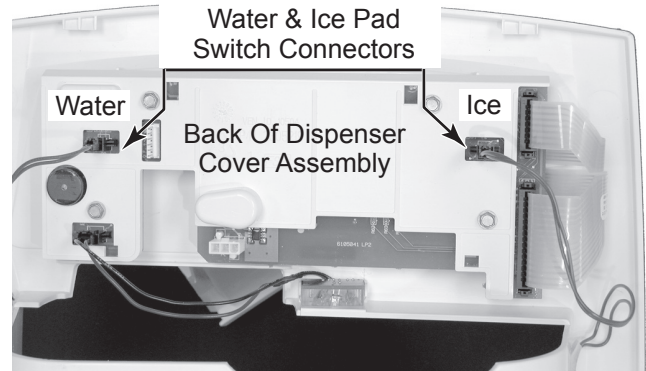
7. To remove the core board:

- a) Remove the wire connectors from P1, P2, P3, P5, P6, and P7.
- b) Unclip the tabs at the top of the board, and remove the shield and board from the dispenser housing. **NOTE:** If the tabs become damaged, secure the board with two screws at the indicated top corner locations.

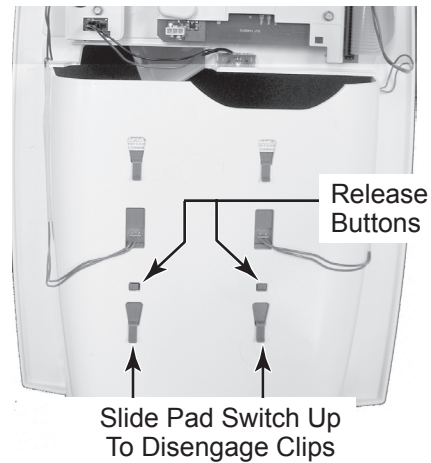


8. To remove an ice or water pad switch:

- a) With the back of the dispenser cover assembly facing up, press the release tab in on the wire connector, and pull the connector off the user interface board pins.



- b) Press in on the release button, and slide the pad switch clips off the dispenser cover assembly.

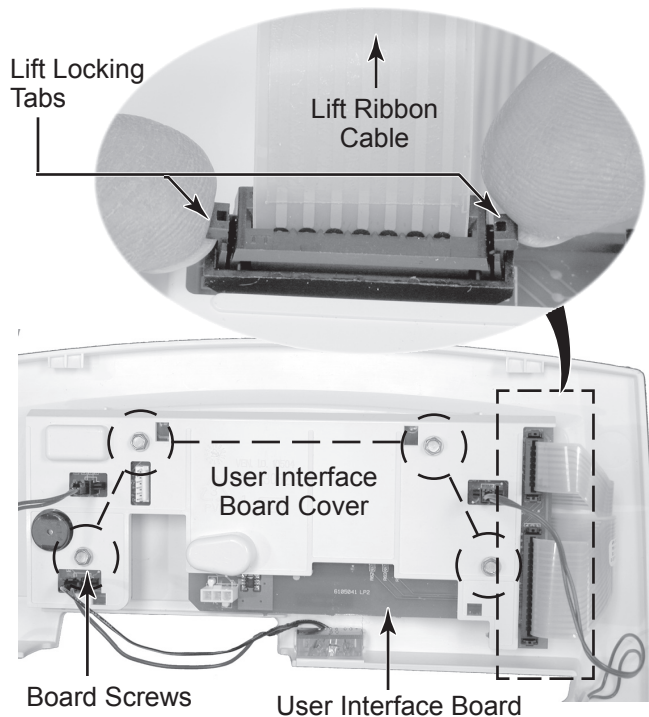


- c) Remove the pad switch assembly.



9. To remove the user interface board:

- With the back of the dispenser cover assembly facing up, disconnect the user interface ribbon cables from the board connectors. To do this, lift the locking tabs, and pull the cables out of the connectors.
- Remove the four screws from the user interface board, and remove the board and its cover from the dispenser cover assembly.



10. To remove the user interface:

- Remove the user interface board (see step 9).

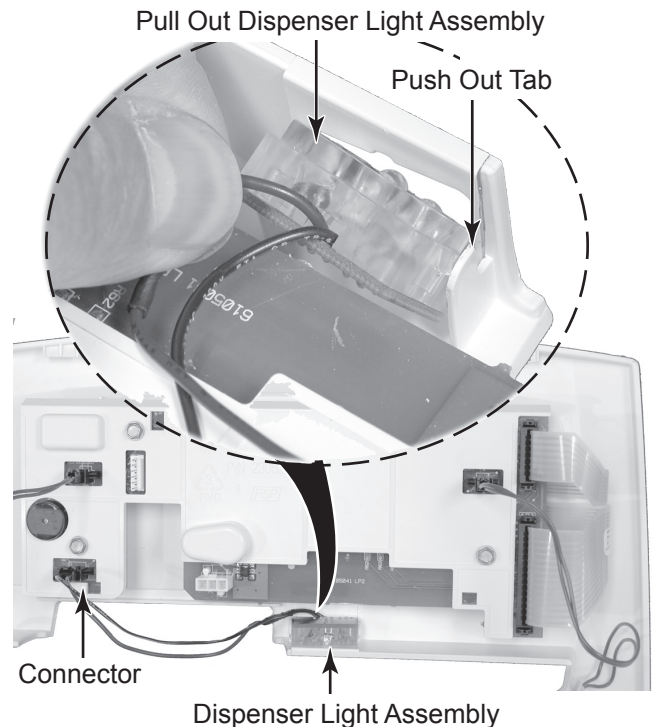


- Carefully lift one of the corners of the user interface, and peel it off the dispenser cover assembly.



11. To remove the dispenser light (LED) assembly:

- With the back of the dispenser cover assembly facing up, disconnect the wire connector from the user interface board.
- Push out on either of the two tabs, and pull the light assembly off the dispenser cover assembly.



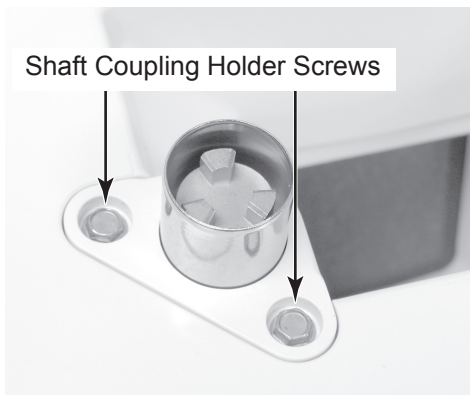
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12. To remove the IDI motor:

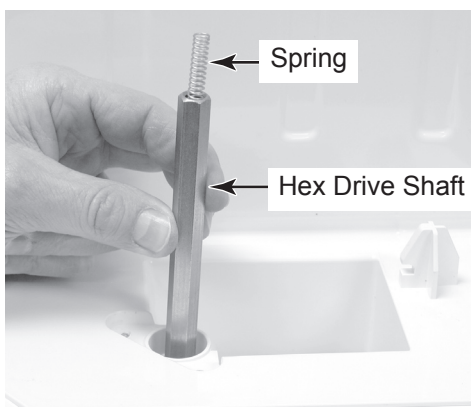
- a) Open the freezer door.
- b) Press in on the release button and remove the ice bin from the door shelf.



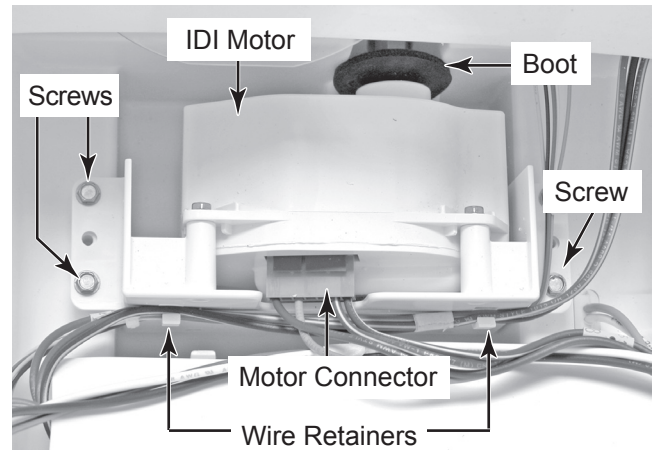
- c) Remove the two screws from the hex drive shaft coupling holder and remove the coupling assembly.



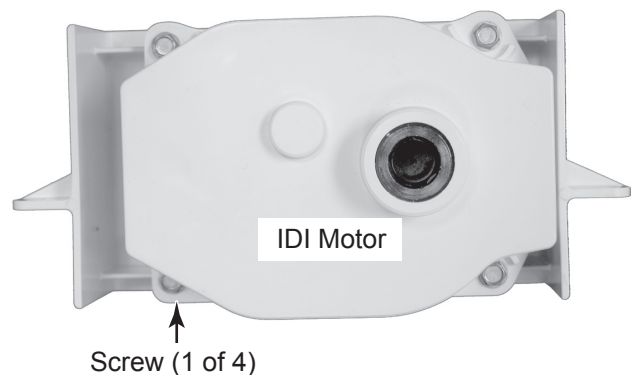
- d) Lift the spring and hex drive shaft up and out of the door.



- e) Remove the boot from the top of the IDI motor.
- f) Disconnect the connector from the IDI motor.
- g) Unclip the wires from the retainers under the IDI motor housing.
- h) Remove the three screws from the IDI motor housing and remove the motor and housing from the dispenser.

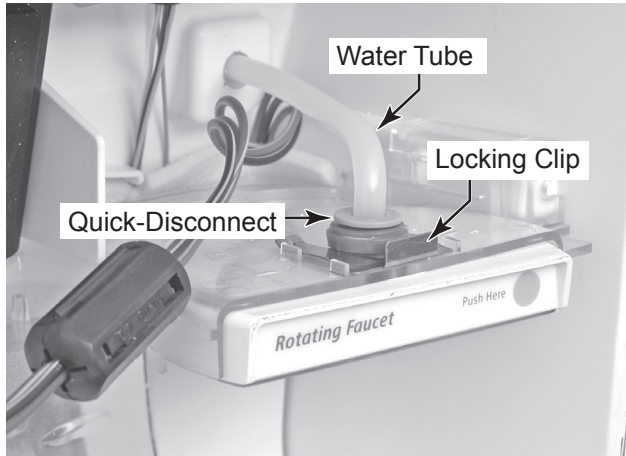


- i) Remove the four screws from the IDI motor and remove the motor from the housing.



13. **To remove the water dispenser nozzle:**

- a) Pull the water tube from the quick-disconnect.
- b) Pull out on the locking clip and remove it from around the quick-disconnect.



- c) Remove the cover from the water nozzle housing.
- d) Unclip the water nozzle and remove it from the housing.



REMOVING THE FREEZER DOOR DISPENSER SUPPLY HARNESS AND WATER TUBE

⚠ WARNING



Electrical Shock Hazard

**Disconnect power before servicing.
Replace all parts and panels before
operating.**

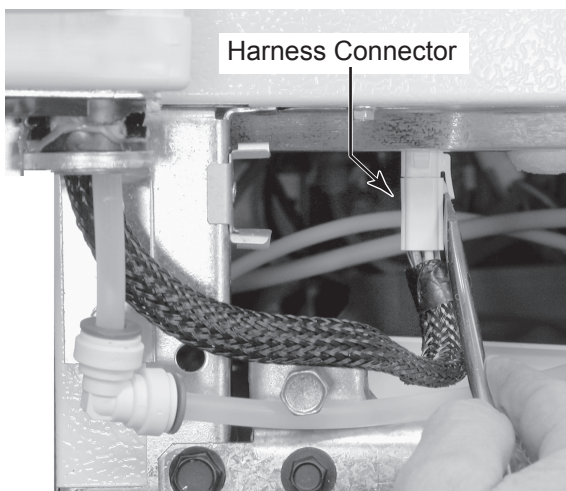
**Failure to do so can result in death or
electrical shock.**

1. Unplug refrigerator or disconnect power.
2. Open the refrigerator and freezer doors and remove the bottom grille.



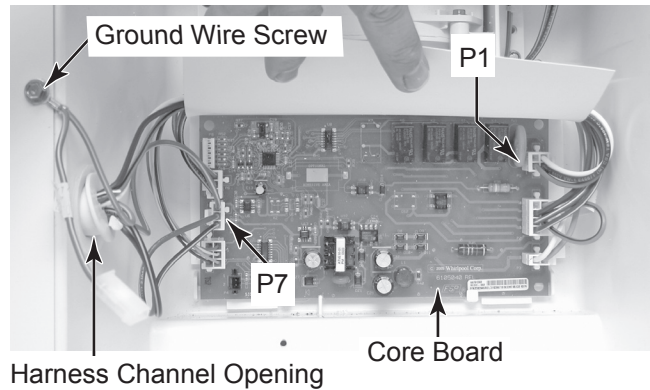
Bottom Grille

3. **To remove the freezer door dispenser supply harness:**
 - a) Using a screwdriver, pry out on the harness connector locking tab, and disconnect the harness connector from the main harness.



Harness Connector

- b) Remove the dispenser cover assembly (see page 3-2 for the procedure).
- c) Disconnect harness connectors P1 and P7 from the core board.
- d) Disconnect the screw from the green ground wire eyelet.



Harness Channel Opening

Core Board

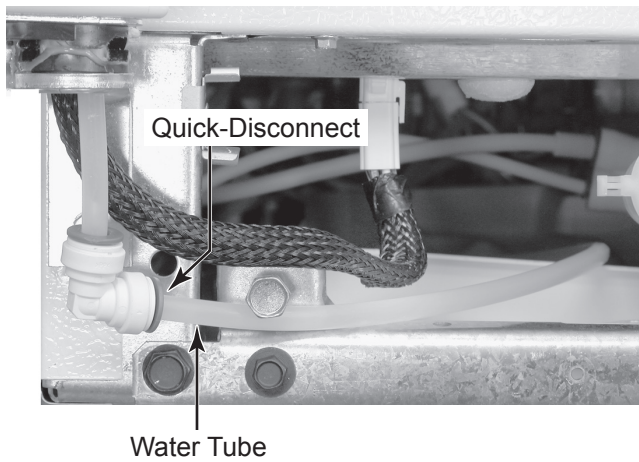
- e) Grasp the ends of the harness wires firmly and pull the harness up and out of the channel opening in the freezer door.



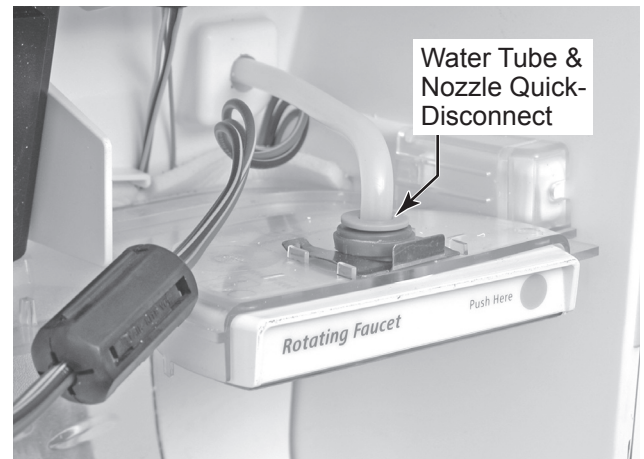
Pull Harness Out
Of Channel Opening

4. **To remove the dispenser water tube:**
 - a) Turn off the water supply to the refrigerator.
 - b) Place a towel or a small container to catch any water when you disconnect the water supply tubing under the freezer door hinge.

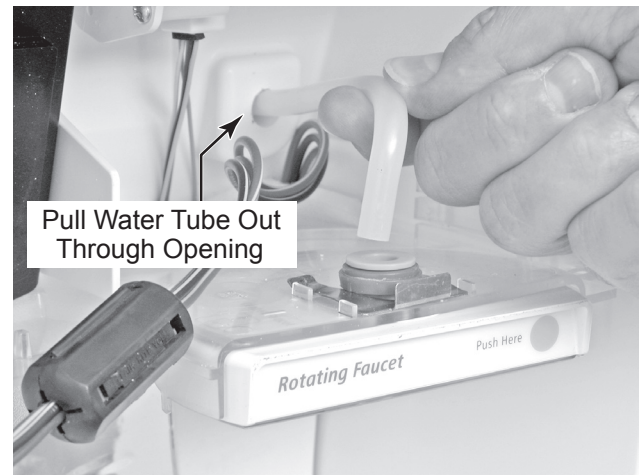
- c) Disconnect the quick-disconnect fitting and allow any water to drain into the container or onto the towel.



- d) Disconnect the water tube from the water nozzle quick-disconnect.



- e) Pull the water tube out of the freezer door channel and remove the tube.



REMOVING THE SMART VALVE

⚠ WARNING

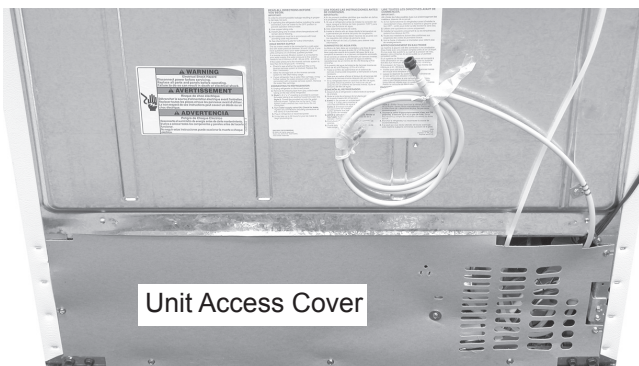


Electrical Shock Hazard

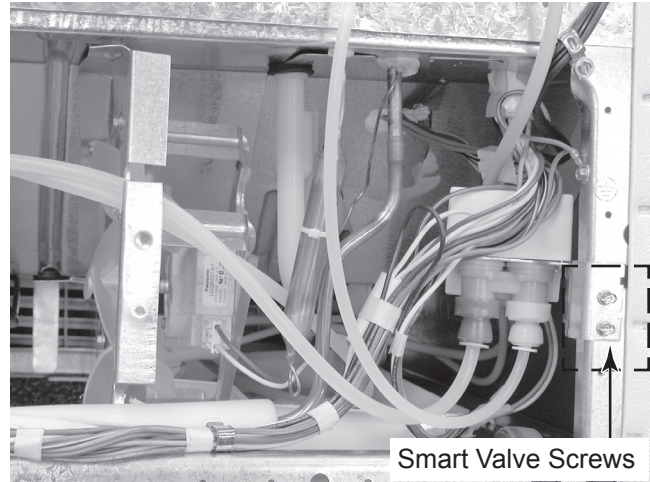
**Disconnect power before servicing.
Replace all parts and panels before
operating.**

**Failure to do so can result in death or
electrical shock.**

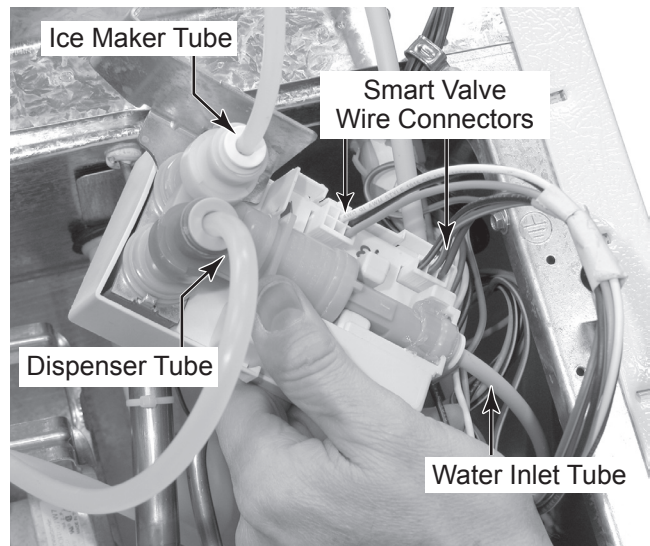
1. Unplug refrigerator or disconnect power.
2. Turn off the water supply to the refrigerator.
3. Pull the refrigerator away from the wall so that you can access the rear of the unit.
4. Remove the screws from the unit access cover and remove the cover.



5. Remove the two screws from the smart valve bracket, and remove the assembly from the side of the refrigerator.



6. Place a towel or a small container to catch any water when you disconnect the water supply tubing.
7. Disconnect the water inlet and ice maker and dispenser outlet tubes from the quick-disconnects.
8. Disconnect the smart valve wire connectors from the smart valve and remove the smart valve assembly.



REMOVING THE FREEZER DOOR

⚠ WARNING



Electrical Shock Hazard
Disconnect power before servicing.
Replace all parts and panels before operating.
Failure to do so can result in death or electrical shock.

NOTE: The freezer door is shown being removed in the following procedure. Except for the wiring and water tubing disconnects, the refrigerator door is removed in the same manner.

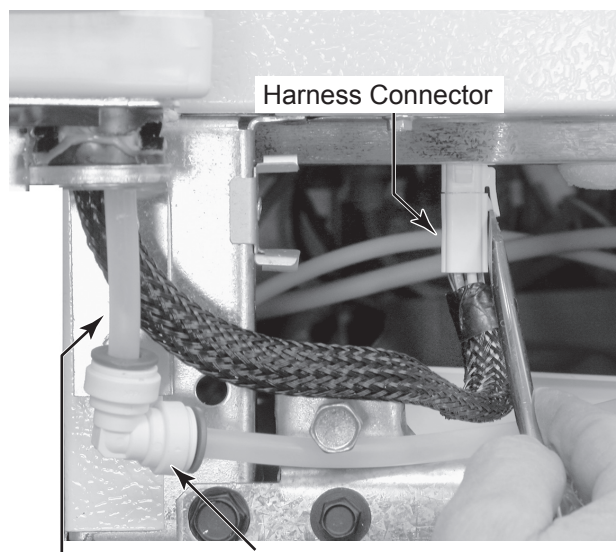
1. Unplug refrigerator or disconnect power.
2. Turn off the water supply to the refrigerator.
3. Open the refrigerator and freezer doors and remove the bottom grille.



Harness & Tubing Disconnects Bottom Grille

4. Close the refrigerator door.
5. Remove the contents from the freezer door shelves.
6. Close the freezer door.

7. Using a screwdriver, pry out on the harness connector locking tab, and disconnect the harness connector from the unit.
8. Place a towel or a small container under the freezer door hinge to catch any water in the tubing when it is disconnected.
9. Pull the quick-disconnect fitting off the water tubing going to the door, and allow any water to drain into the container or onto the towel.



Water Tubing & Quick-Disconnect

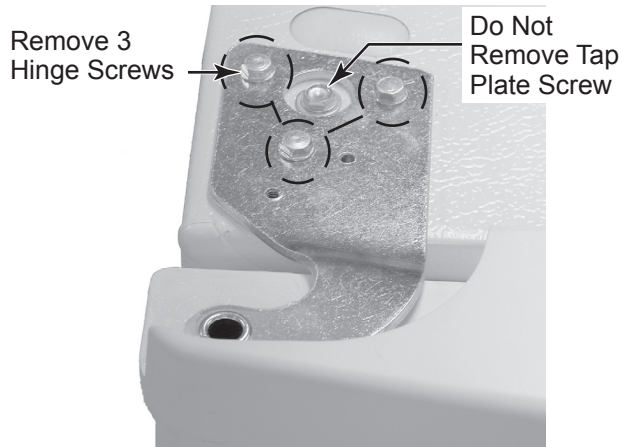
10. Remove the screw from the top hinge cover and remove the cover.



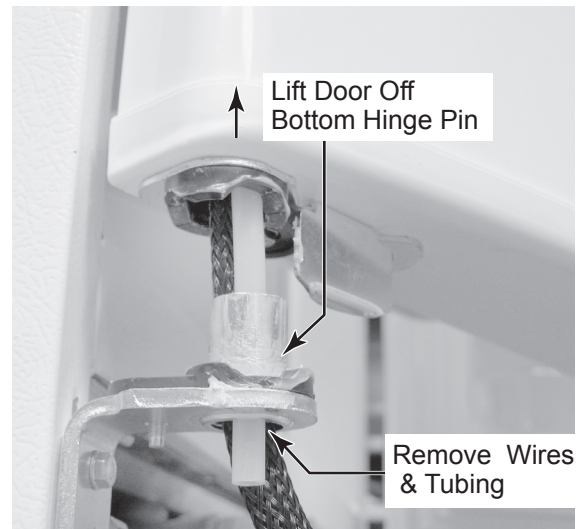
Continued on the next page.

NOTE: Support the freezer door so that it does not fall in the next step.

11. With the freezer door closed, remove the three screws from the top hinge, and remove the hinge. **IMPORTANT:** DO NOT remove the tap plate retainer screw inside the center hinge cutout.



12. Partially open the freezer door and lift it off the bottom hinge pin. Guide the wires and tubing through the hinge opening, and remove the door.



COMPONENT TESTING

Before testing any of the components, perform the following checks:

- The most common cause for control failure is corrosion on connectors. Therefore, disconnecting and reconnecting wires will be necessary throughout test procedures.
- All tests/checks should be made with a VOM or DVM having a sensitivity of 20,000 ohms-per-volt DC, or greater.
- Check all connections before replacing components, looking for broken or loose wires, failed terminals, or wires not pressed into connectors far enough.
- Resistance checks must be made with power cord unplugged from outlet, and with wiring harness or connectors disconnected.

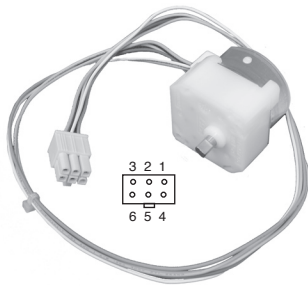


⚠ WARNING

Electrical Shock Hazard

Disconnect power before servicing.
Replace all parts and panels before operating.
Failure to do so can result in death or electrical shock.

ICE DOOR MOTOR



Refer to page 3-2 for the procedure for accessing the ice door motor.

1. Unplug refrigerator or disconnect power.
2. Disconnect the motor connector at P5 on the core board.
3. Set the ohmmeter to the R x 1 scale.
4. Touch the ohmmeter test leads to the following motor connector pins:
Pin 1 to pin 2,3,5,or 6 = 45 to 55 Ω

WATER & ICE PAD SWITCHES



Refer to page 3-2 for the procedure for accessing the water & ice pad switches.

1. Unplug refrigerator or disconnect power.
2. Disconnect the water and ice pad switch connector from the user interface board.
3. Set the ohmmeter to the R x 1 scale.
4. Touch the ohmmeter test leads to the pad switch connector pins. The meter should indicate between 100 and 175 Ω .



⚠ WARNING

Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

IDI MOTOR



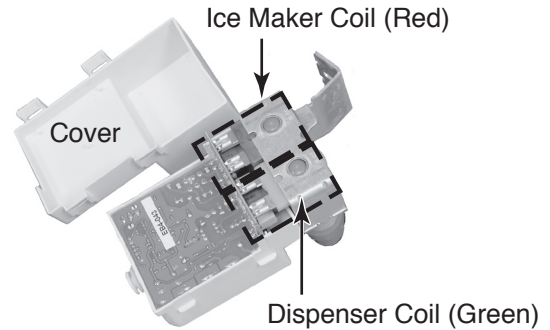
Refer to page 3-2 for the procedure for accessing the IDI motor.

1. Unplug refrigerator or disconnect power.
2. Disconnect the IDI motor connector.
3. Set the ohmmeter to the R x 1 scale.
4. Touch the ohmmeter test leads to the following motor connector pins:

Pins 1 and 2 = 10 to 15 Ω

Pins 4 and 5 = 220 to 270 Ω

SMART VALVE COILS



Refer to page 3-10 for the procedure for accessing the smart valve.

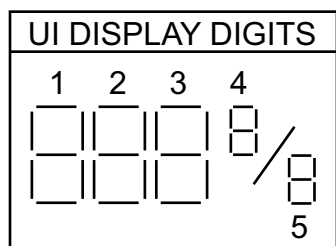
1. Unplug refrigerator or disconnect power.
2. Unsnap and remove the cover from the smart valve housing.
3. Set the ohmmeter to the R x 10 scale.
4. Touch the ohmmeter test leads to either coil connector. The meter should indicate between 240 and 280 Ω .

DIAGNOSTICS & TROUBLESHOOTING

DIAGNOSTICS

Use the following procedure to enter the diagnostics mode:

1. Make sure that the unit is not in the “lock-out” mode.
2. Press and hold the CUBED and LIGHT buttons for about 3 seconds until the unit beeps, then release both buttons.
3. Diagnostics will begin with step 0. **NOTE:** Each step displays the step number in digits 4 and 5 (see below) of the user interface display, and the step result, using the first three digits (1 - 3).



4. Each step must be manually advanced by pressing the LOCKOUT button to move to the next step in the sequence, or back up to the previous step by pressing the FILTER RESET button.

5. All buttons and pads are inoperative, except for those described in the actions for each step.
6. The diagnostics charts shown on the following pages describe each component that is tested.
7. If communication is lost with the dispenser core control board, steps 10 - 14 will display “- - -” on digits 1 - 3.
8. If communication is lost with the smart valve control, steps 15 - 20 will display “- - -” on digits 1 - 3.
9. The diagnostics mode ends automatically after the steps are complete, or 20 minutes have elapsed (whichever comes first). The diagnostics mode may be manually exited by pressing the LIGHT button during any step, or in the case that electrical power is cycled. Following the exit of the diagnostics mode, the controls will resume normal operation.

WHIRLPOOL MODELS

Step #	Component Tested	Suggested Diagnostics Routine	Component Status Indicator
0	All UI indicators	Verify that all LED indicators, UI display digits, and dispenser lighting turn on automatically	N/A
1	Dispenser UI Control SW Version	Displays the Dispenser UI Control software version on Digits 1 to 3 of the UI display	N/A
2	N/A	N/A	N/A
3	Water Filter Usage Rating	Displays the total water usage rating in gallons for the water filter on Digits 1 to 3 of the UI display	200
4	Water Filter Time Rating	Displays the total time rating in days for the water filter on Digits 1 to 3 of UI display	182
5	UI Pad and Button Test	Note: Do not use LOCKOUT , FILTER RESET and LIGHT as these buttons are only used to control the Service Diagnostic Mode as previously described. Displays the status of both Water and Ice pads on Digit 1. Depress the pads in all combinations to verify the appropriate status indications as shown in the Component Status Indicator Column. Displays the UI Button matrix on Digits 2 and 3. Depress each UI button to verify the appropriate status indications as shown in the Component Status Indicator column.	Digit 1: Ice Pad "1" Water Pad "2" Ice & Water Pad "3" Digits 2 and 3: + "13" CRUSHED "14" CONTAINER "22" UNITS "23" CUBED "24" MEASURED FILL "32" - "33" WATER "34"
6	Night Light Sensor	Displays the Night Light Sensor reading on Digits 1 to 3 of UI display. Cover the sensor to verify a decrease in the result.	N/A
7	Dispenser Lighting	Verify that the dispenser lighting cycles between Maximum and Minimum output levels.	N/A
8	Dispenser Housing Heater Status	Digit 3 must read "1". Press CUBED to change.	Digit 3: Housing Heater Off "0" Housing Heater On "1"
9	N/A	N/A	N/A
10	Dispenser Core Control SW Version	Displays the Dispenser Core Control software version on Digits 1 to 3 of the UI display.	N/A
11	N/A	N/A	N/A
12	FC Door Switch Input	Displays the FC Door status in realtime on Digit 3 of the UI display. Verify that the open and close status display correctly	FC Door Closed "0" FC Door Open "1"
13	N/A	N/A	N/A
14	Ice Door Motor	Displays the Ice Door stepper motor state on Digit 3 of the UI display. Initiate ice dispense and verify that the mechanical operation of the Ice Door corresponds to the component status indicator. Note: Ice Door will close 10 sec. following release of Ice Pad. Ice will dispense upon Ice Pad depressing	Ice Door Closed "0" Ice Door Opening "1" Ice Door Open "2" Ice Door Closing "3"
15	Smart Valve SW Version	Displays the Smart Valve software version on Digits 1 to 3 of the UI display.	N/A
16	N/A	N/A	N/A
17	N/A	N/A	N/A
18	Water Filter Usage	Displays the current water filter status in gallons used since last reset on Digits 1 to 3	0 to 999
19	Water Filter Time	Displays the current water filter status in days since last reset on Digits 1 to 3	0 to 999
20	Water Dispensing and Icemaker Fill Test	Displays Icemaker status on Digit 1. Initiate icemaker fill and verify that display changes from "0" to "3". If a water dispense is in progress while the icemaker fill is initiated, the display will change to "1". Once the water dispense is complete, the icemaker fill will begin and the display will change to "3" as long as it is not interrupted by a water dispense. Displays water valve status on Digit 2 and flowsensor status on Digit 3. Initiate water dispense and verify Digit 2 changes to "1" and Digit 3 remains "0" during water dispense	Digit 1: Icemaker Off "0" Icemaker Fill Pending "1" Icemaker Filling "3" Digit 2: Water Dispenser Valve Off "0" Water Dispenser Valve On "1" Digit 3: Flowsensor Okay "0" Flowsensor Failed "1"

KITCHENAID MODELS

Step #	Component Tested	Suggested Diagnostics Routine	Component Status Indicator
0	All UI indicators	Verify that all LCD icons, UI LCD display digits, UI button lighting, and dispenser lighting turn on automatically	N/A
1	Dispenser UI Control SW Version	Displays the Dispenser UI Control software version on Digits 1 to 3 of the UI display	N/A
2	N/A	N/A	N/A
3	Water Filter Usage Rating	Displays the total water usage rating in gallons for the water filter on Digits 1 to 3 of the UI display	200
4	Water Filter Time Rating	Displays the total time rating in days for the water filter on Digits 1 to 3 of UI display	182
5	UI Pad and Button Test	Note: Do not use Lockout , Filter and Light as these buttons are only used to control the Service Diagnostic Mode as previously described. Displays the status of both Water and Ice pads on Digit 1. Depress the pads in all combinations to verify the appropriate status indications as shown in the Component Status Indicator Column. Displays the UI Button matrix on Digits 2 and 3. Depress Ice button to verify the appropriate status indication as shown in the Component Status Indicator column.	<u>Digit 1:</u> Ice Pad "1" Water Pad "2" Ice & Water Pad "3" <u>Digits 2 and 3:</u> Ice "24"
6	Night Light Sensor	Displays the Night Light Sensor reading on Digits 1 to 3 of UI display. Cover the sensor to verify a decrease in the result.	N/A
7	Dispenser Lighting	Verify that the dispenser lighting cycles between Maximum and Minimum output levels.	N/A
8	Dispenser Housing Heater Status	Digit 3 must read "1". Press Ice to change.	<u>Digit 3:</u> Housing Heater Off "0" Housing Heater On "1"
9	LCD Contrast Setting	Displays the LCD contrast on Digits 2 and 3 of the UI display. The contrast setting can be changed by depressing Ice button.	0 to 15
10	Dispenser Core Control SW Version	Displays the Dispenser Core Control software version on Digits 1 to 3 of the UI display.	N/A
11	N/A	N/A	N/A
12	FC Door Switch Input	Displays the FC Door status in realtime on Digit 3 of the UI display. Verify that the open and close status display correctly	FC Door Closed "0" FC Door Open "1"
13	N/A	N/A	N/A
14	Ice Door Motor	Displays the Ice Door stepper motor state on Digit 3 of the UI display. Initiate ice dispense and verify that the mechanical operation of the Ice Door corresponds to the component status indicator. Note: Ice Door will close 10 sec. following release of Ice Pad. Ice will dispense upon Ice Pad depressing	Ice Door Closed "0" Ice Door Opening "1" Ice Door Open "2" Ice Door Closing "3"
15	Smart Valve SW Version	Displays the Smart Valve software version on Digits 1 to 3 of the UI display.	N/A
16	N/A	N/A	N/A
17	N/A	N/A	N/A
18	Water Filter Usage	Displays the current water filter status in gallons used since last reset on Digits 1 to 3	0 to 999
19	Water Filter Time	Displays the current water filter status in days since last reset on Digits 1 to 3	0 to 999
20	Water Dispensing and Icemaker Fill Test	Displays Icemaker status on Digit 1. Initiate icemaker fill and verify that display changes from "0" to "3". If a water dispense is in progress while the icemaker fill is initiated, the display will change to "1". Once the water dispense is complete, the icemaker fill will begin and the display will change to "3" as long as it is not interrupted by a water dispense. Displays water valve status on Digit 2 and flowsensor status on Digit 3. Initiate water dispense and verify Digit 2 changes to "1" and Digit 3 remains "0" during water dispense	<u>Digit 1:</u> Icemaker Off "0" Icemaker Fill Pending "1" Icemaker Filling "3" <u>Digit 2:</u> Water Dispenser Valve Off "0" Water Dispenser Valve On "1" <u>Digit 3:</u> Flowsensor Okay "0" Flowsensor Failed "1"

MODULAR ICE MAKER & ICE LEVEL DETECTOR MODELS

MODULAR ICE MAKER & ICE LEVEL DETECTOR SERVICE SHEET

ICEMAKER SPECIFICATIONS (120 VOLT MODEL):

COMPONENT	25' & 27' MODELS	22' MODELS
WATER FILL	130CC, 7.5 SEC	86CC, 7.5 SEC
MOLD HEATER	Non-Finned: 185 WATTS, 72 OHMS Finned: 260 WATTS, 51 OHMS	All: 185 WATTS, 72 OHMS
THERMOSTAT (BIMETAL)	CLOSE 17° +/- 3° OPEN 32° +/- 3°	
MOTOR	3.2-1.5 WATTS, 4,400-8,800 OHMS	
MODULE	STAMPED CIRCUIT, PLUG IN CONNECTORS	
CYCLE	ONE REVOLUTION (EJECTS ICE & WATER FILL)	

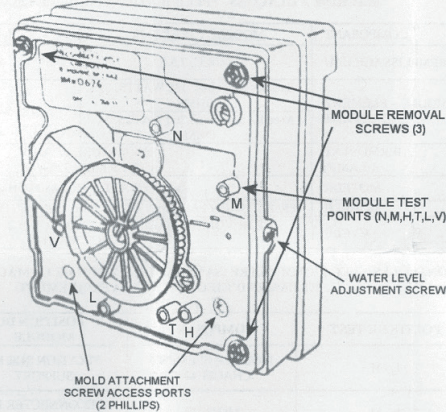
MODULE OHMMETER CHECKS (NO POWER TO ICEMAKER & EJECTOR BLADES IN PARK)

TEST POINTS	COMPONENT	MODULE POSITION	OHMS
L - H	MOLD HEATER	ATTACHED TO SUPPORT	72 / 51 (see mold heater above)
L - M	MOTOR	DISCONNECT FROM SUPPORT	8800

MODULE VOLTAGE CHECKS WITH METER OR TEST LIGHT (POWER TO ICEMAKER)

TEST POINTS	COMPONENT	LINE VOLTAGE	0 VOLTS
L - N	MODULE	POWER OK	NO POWER
T - H	BIMETAL	OPEN	CLOSED
L - H	HEATER	ON	OFF
L - M	MOTOR	ON	OFF
N - V	WATER VALVE	ON	OFF

ICEMAKER MODULE



WATER LEVEL ADJUSTMENT

TURNING THE ADJUSTMENT SCREW (SEE PICTURE ABOVE) CLOCKWISE DECREASES THE WATER FILL.

· MAXIMUM ADJUSTMENT IS ONE FULL TURN IN EITHER DIRECTION. ADDITIONAL ROTATION COULD DAMAGE THE MODULE.

ICEMAKER DIAGNOSTICS PROCEDURE:

1. PERFORM THE OPTICS DIAGNOSTIC PROCEDURE

OPTICS DIAGNOSTICS PROCEDURE:			
STEP #	STATUS LED	POSSIBLE CAUSES	ACTION
A. OPEN THE FREEZER DOOR	1.A.1. 2 PULSES FOLLOWED BY A 1 SECOND DELAY. (REPEATED)	THE FLAPPER DOOR ON THE EMITTER IS BLOCKING THE BEAM.	GO TO STEP 2.
		THE OPTICS ARE FAULTY	GO TO STEP 2.
	1.A.2. NO LAMP	ICEMAKER IS IN THE HARVEST MODE.	PRESS IN THE FREEZER DOOR SWITCH. WHEN IN THE HARVEST MODE THE STATUS LED WILL BLINK 1 FLASH EVERY SECOND.
B. PRESS IN THE EMITTER FLAPPER DOOR TO UNBLOCK THE BEAM.	1.B.1. PULSES FOLLOWED BY A 1 SECOND DELAY. (REPEATED)	THE OPTICS ARE FAULTY	REPLACE RECEIVER BOARD.
		OPTICS ARE WORKING CORRECTLY	CLOSE FREEZER DOOR
	1.B.2. LED IS ON SOLID		

2. DISCONNECT THE POWER SUPPLY 3. SLIDE THE ICEMAKER OUT, REMOVE COVER. 4. JUMP "T" & "H" TO BYPASS THE BIMETAL AND START A HARVEST. 5. CONNECT THE POWER SUPPLY. 6. CLOSE THE FREEZER DOOR TO ALIGN THE OPTICS AND A HARVEST CYCLE WILL BEGIN IN 5 SECONDS. 7. OPEN THE FREEZER DOOR AND OBSERVE THE ICEMAKER. IF "T" TO "H" IS PROPERLY JUMPED AND THE ICEMAKER WON'T RUN STOP TEST AND CHECK THE ICEMAKER.	8. REMOVE THE JUMPER BEFORE THE FINGERS REACH 10:00. REINSTALL THE ICEMAKER OR BE PREPARED TO CATCH THE WATER FILL. 9. IMMEDIATELY DISCONNECT POWER AFTER THE WATER FILL. 10. WITH THE FREEZER DOOR CLOSED, RECONNECT THE POWER SUPPLY. 11. WAIT 5 SECONDS AND OPEN THE FREEZER DOOR AND WATCH THE STATUS LED.	STATUS LED OUTPUT CODE: 4 PULSES, REPEATED ONCE INDICATES THE RELAY IS DEFECTIVE. REPLACE BOTH THE EMITTER AND RECEIVER BOARDS. 3 PULSES, REPEATED ONCE, INDICATES OPTICS AND RELAY ARE GOOD, BUT I/M IS NOT BEING SENSED/WILL NOT OPERATE. • CHECK BAIL ARM SWITCH. (MUST BE ON) • CHECK I/M CIRCUIT AND CONNECTIONS BACK TO THE RECEIVER BOARD AND NEUTRAL. • CHECK I/M COMPONENTS.
		2 PULSES, REPEATED ONCE, INDICATES OPTICS ARE DEFECTIVE. REPEAT STEP ONE AND REPLACE BOTH BOARD IF NECESSARY. STEADY LIGHT FOR 5 SECONDS INDICATES THE RELAY AND OPTICS ARE GOOD, AND THE RECEIVER SENSES THE ICEMAKER. NO LIGHT, UNPLUG THE REFRIGERATOR FOR 5 SECONDS AND REPEAT TEST.

TROUBLESHOOTING

Flowcharts

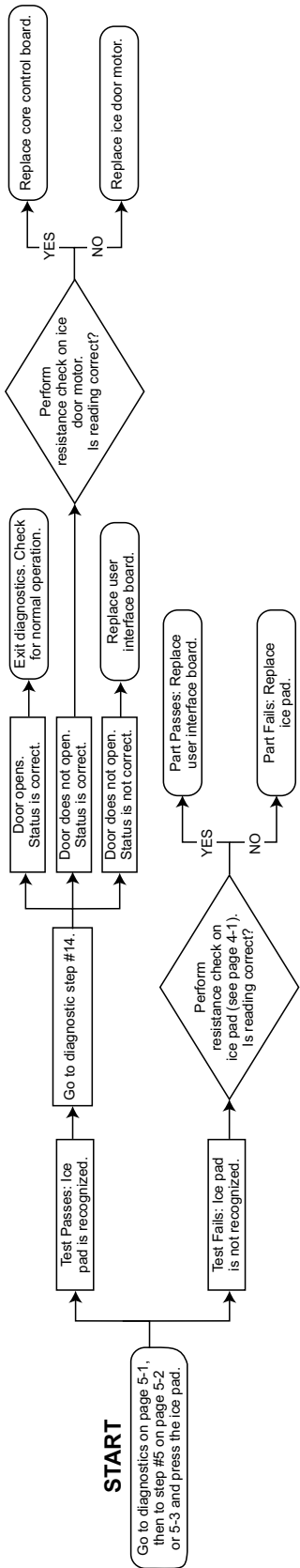
The flowcharts on the following pages are intended to be used with the Diagnostics Charts. If a problem occurs during the diagnostics tests, refer to the flowcharts to help locate and correct it. The flowcharts cover the following problems:

1. Ice Cannot Be Dispensed (Water Dispenser Is Operating Normally) - Page 5-6.
2. Both Ice And Water Cannot Be Dispensed - Page 5-7.
3. Ice Maker Does Not Produce Ice (Water Dispenser Is Operating Normally) - Page 5-8.
4. Ice Maker Does Not Produce Enough Ice - Page 5-8.
5. Water Cannot Be Dispensed (Ice Maker Is Operating Normally) - Page 5-9.
6. Measured Fill Is Not Accurate - Page 5-10.
7. Water Dispenser Fill Is Too Slow - Page 5-10.
8. Dispenser Lighting Does Not Operate - Page 5-11.
9. Dispenser Lighting Does Not Operate Correctly In The “Auto” Mode - Page 5-11.
10. Dispenser Lighting Does Not Turn Off - Page 5-11.
11. User Interface Keypad Buttons Do Not Operate Correctly - Page 5-12.
12. User Interface Display Indicators Do Not Operate Correctly - Page 5-12.
13. Moisture Present In Dispenser Area - Page 5-13.

1. ICE CANNOT BE DISPENSED (WATER DISPENSER IS OPERATING NORMALLY)

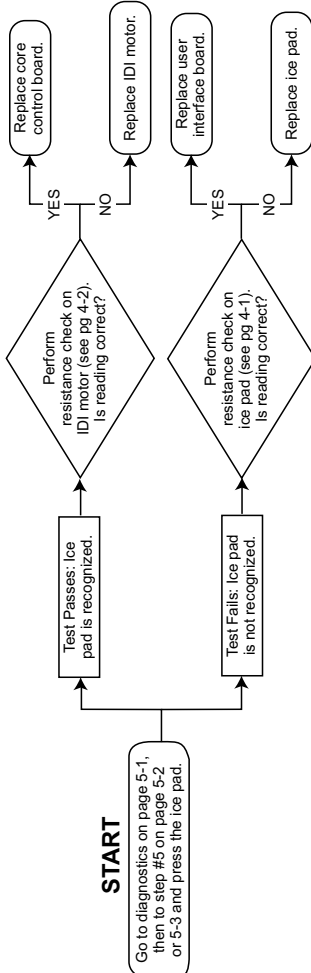
A. Ice Dispenser Door Does Not Open

- Before starting the diagnostics, make sure that there is nothing blocking the ice door.
- Make sure that connector P5 is properly seated with the core board connector, and all wires are tight.

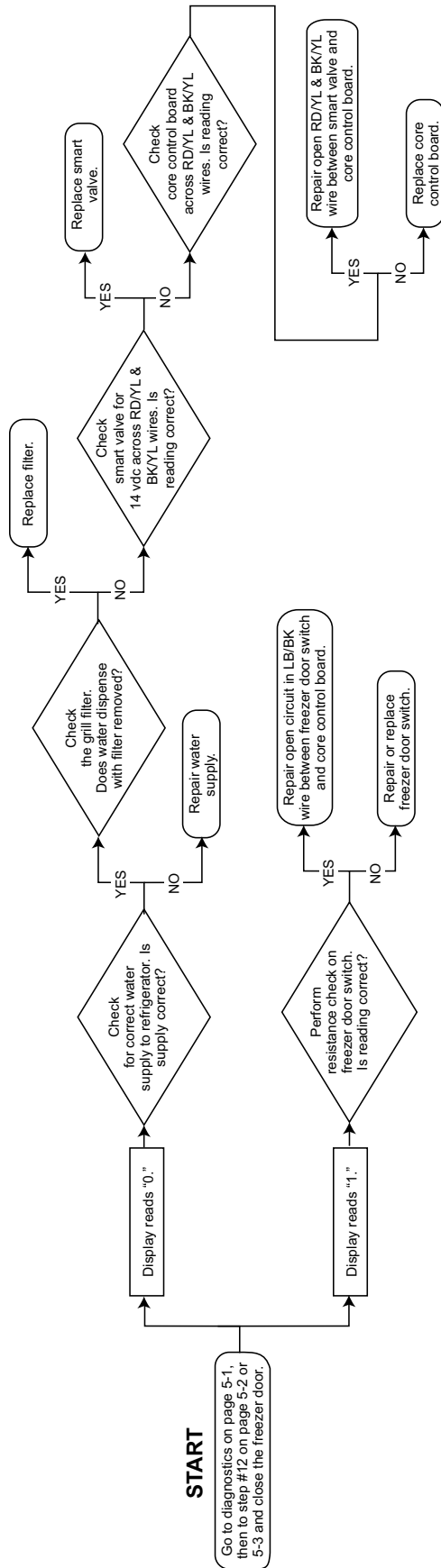


B. In-Door Ice Motor Does Not Operate

- Confirm that connector P2 is properly seated with the core board connector, and all wires are tight.
- Confirm that the IDI motor connector and terminals are tight.

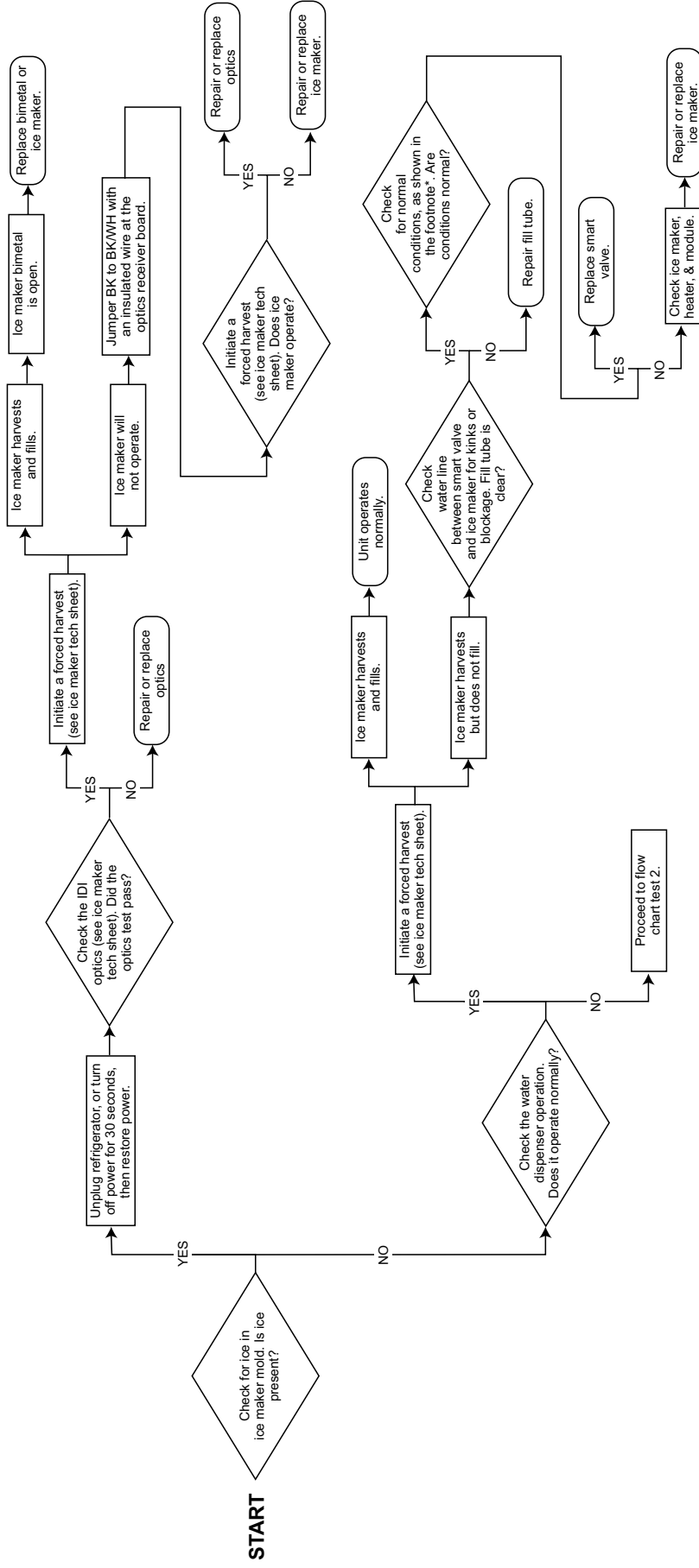


2. BOTH ICE AND WATER CANNOT BE DISPENSED



3. ICE MAKER DOES NOT PRODUCE ICE (WATER DISPENSER IS OPERATING NORMALLY)

- Verify freezer temperature is 5°F or colder. Ice production will be slow from 10°F to 15°F, and will stop at around 18°F.
- Ice maker should be in the “park” (2:00) position.



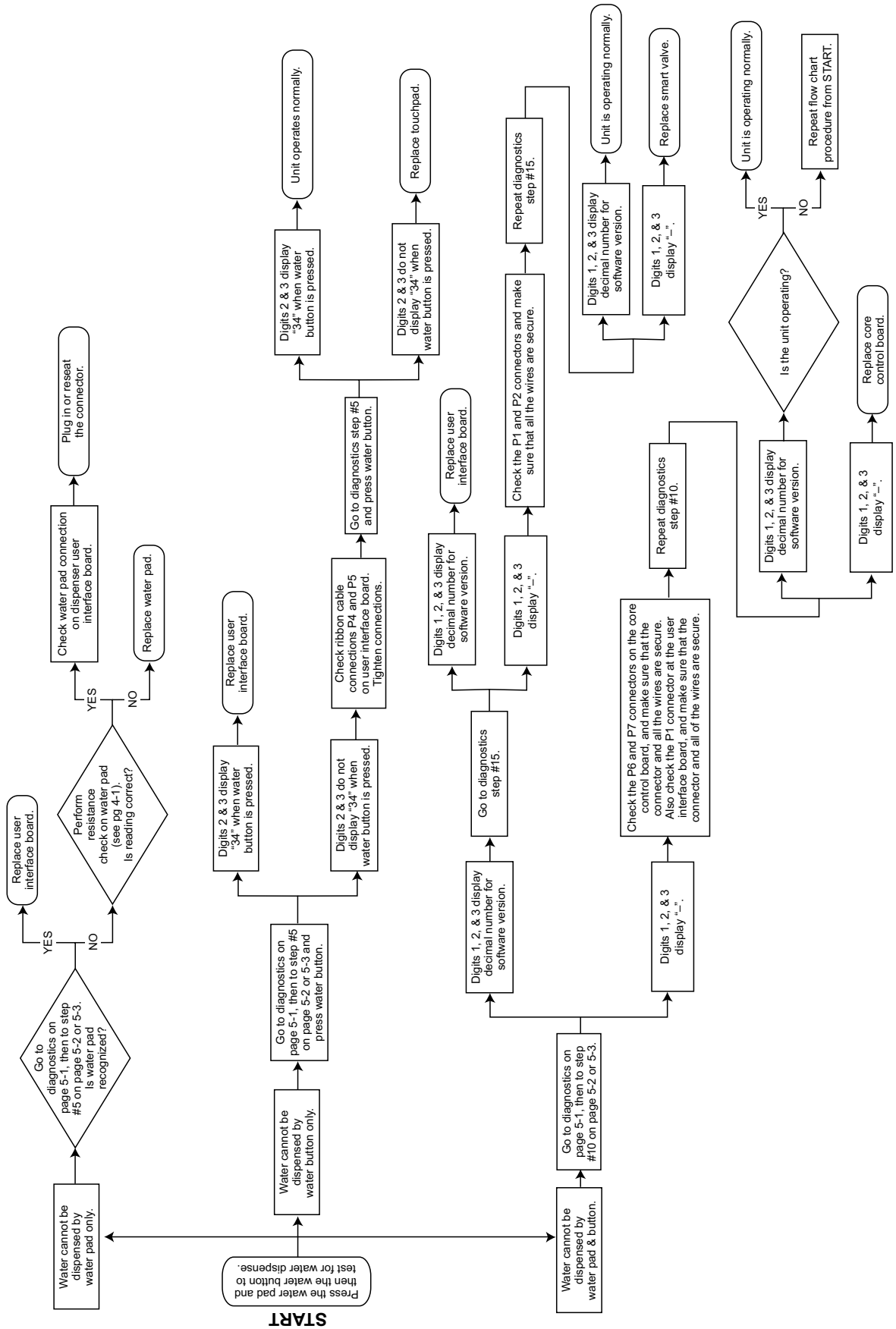
* Voltage will be present on the tan wire of the ice maker for 7 to 8 seconds during harvest just before it reaches the “park” position. This voltage is in series with the mold heater, and will be between 80 and 105 volts ac. The voltage on the tan wire signals the valve to fill the ice maker. Line voltage must always be present across the BK & WH wires at the valve. 14 vdc must always be present across the RD/YL and BK/YL wires on the valves.

4. ICE MAKER DOES NOT PRODUCE ENOUGH ICE

- Verify freezer temperature is 5°F or colder, and that the airflow is not blocked.
- Make sure that the ice maker is receiving the proper amount of water (8 cubes = 4.4 oz. (130 cc) of water).
- Look for high ice usage by customer.
- At 0°F, 80 to 106 cubes of ice in a 24-hour period is normal.

5. WATER CANNOT BE DISPENSED (ICE MAKER IS OPERATING NORMALLY)

- Prior to following the diagnostics routine, make sure that no plumbing leaks exist by checking the connections listed in section "Measured Fill Is Not Accurate."

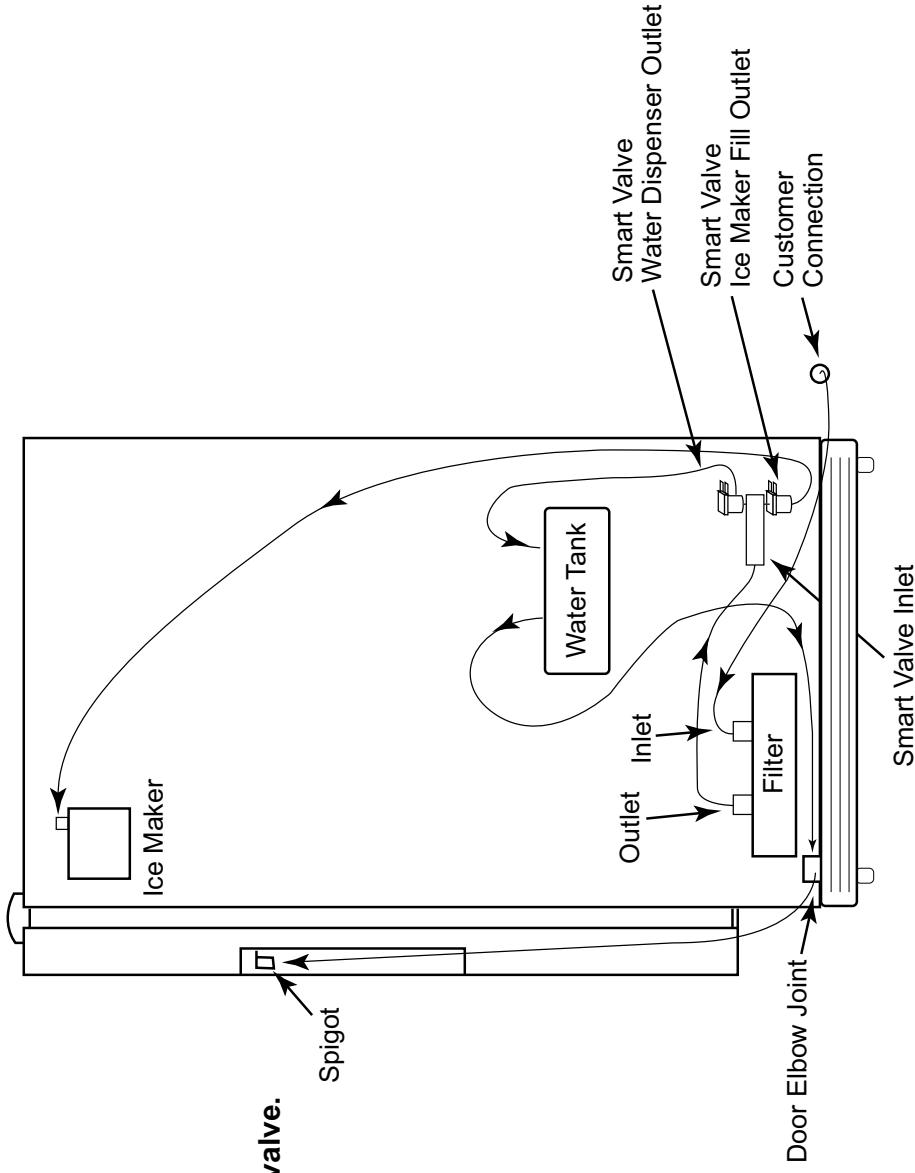


6. MEASURED FILL IS NOT ACCURATE

Consistent measured fill inaccuracies are often due to the smart valve mechanics, low incoming water pressure, or water plumbing leaks. Make sure that no leaks occur in the following locations:

- Door Spigot
- Door Elbow Joint
- Water Tank
- Smart Valve Water Dispenser Outlet
- Smart Valve Ice Maker Fill Outlet
- Smart Valve Inlet
- Customer Connection
- Filter Inlet & Outlet

If no leaks are found, replace the smart valve.

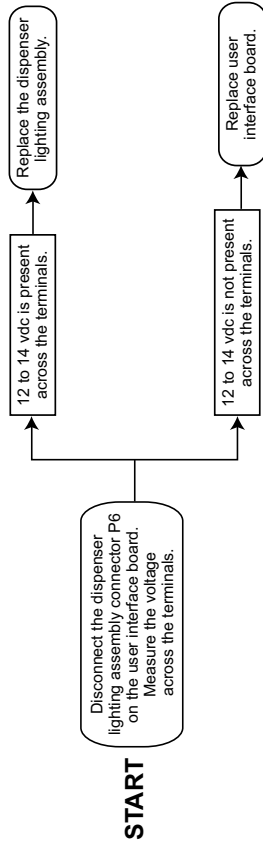


7. WATER DISPENSER FILL IS TOO SLOW

- Verify proper refrigerator water supply.
- Water filter is blocked, or incorrect filter is being used (dispense water with water filter removed to test).
- Check for kinked water tubing.

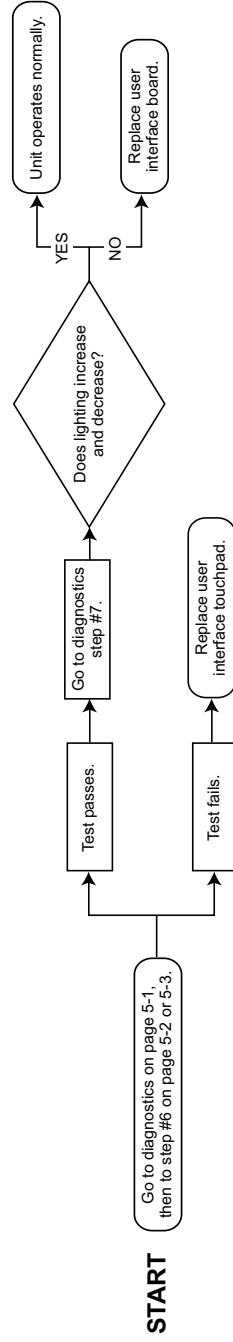
8. DISPENSER LIGHTING DOES NOT OPERATE

- Use this diagnostics procedure in the event that the dispenser night light never turns on.



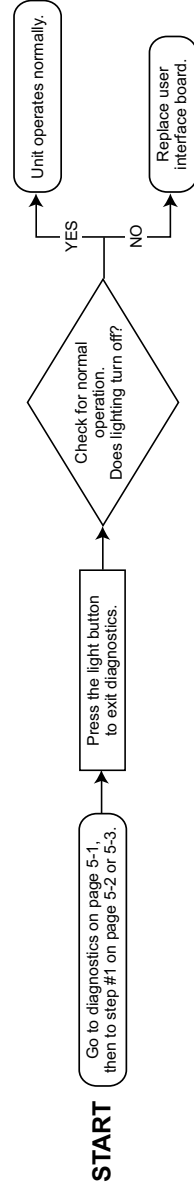
9. DISPENSER LIGHTING DOES NOT OPERATE CORRECTLY IN THE “AUTO” MODE

- Use this diagnostics procedure in the event that the dispenser lighting does not operate correctly when set for AUTO (i.e. lighting should get brighter with more ambient light, and dimmer with less ambient light).



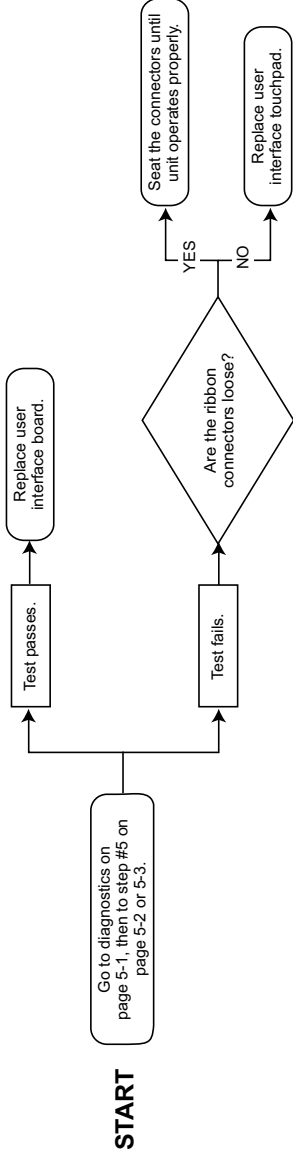
10. DISPENSER LIGHTING DOES NOT TURN OFF

- Make sure that the user interface board ribbon connectors are properly seated on the board.



11. USER INTERFACE KEYPAD BUTTONS DO NOT OPERATE CORRECTLY

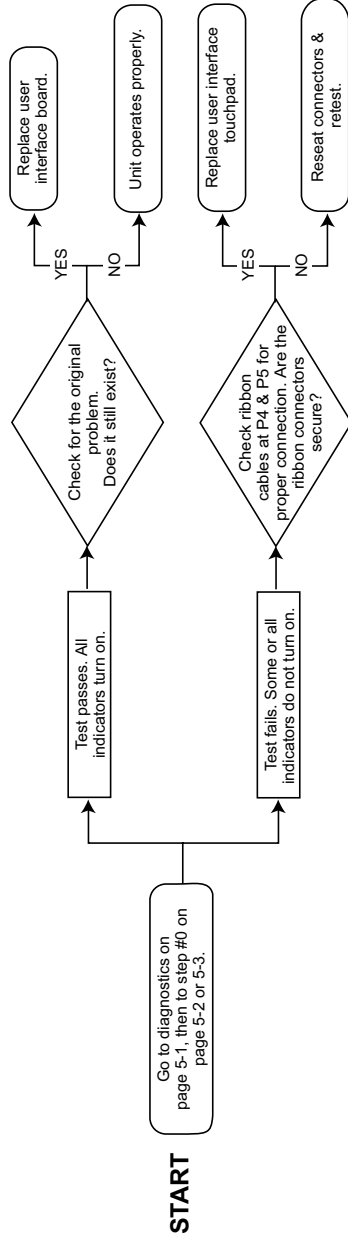
- Use this diagnostics procedure when pressing a button gets no response or audible beep. If an audible beep does occur, but a button gets no response, then there is most likely a wiring problem, or a control board failure. If the failure exists with regards to a water dispense, or measured fill, then refer to the section "Water Cannot Be Dispensed."
- Make sure that the ribbon connection at the user interface board connectors P4 and P5 are seated correctly.



5-12

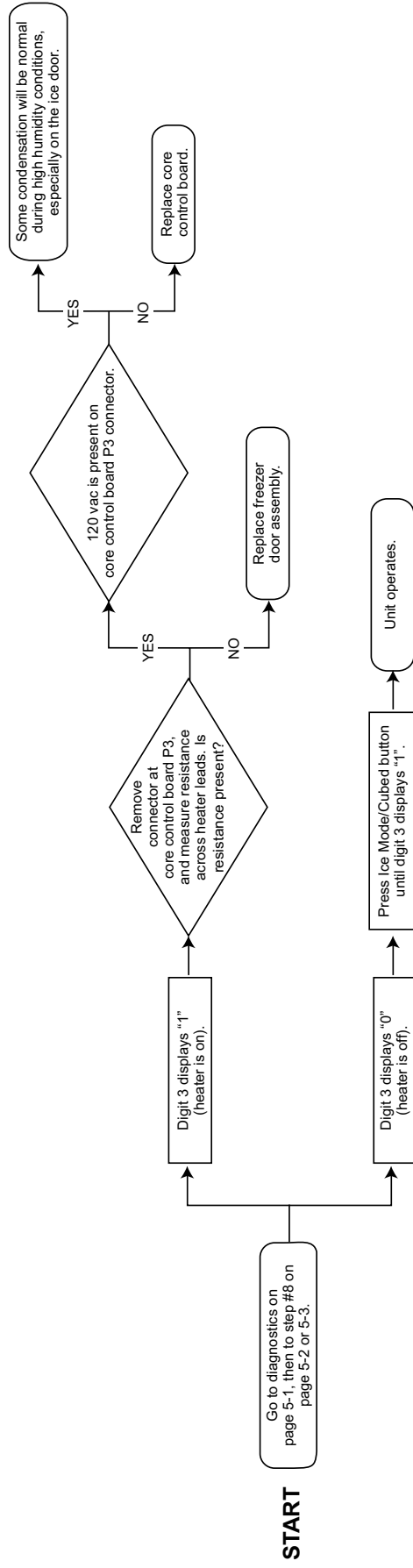
12. USER INTERFACE DISPLAY INDICATORS DO NOT OPERATE CORRECTLY

- Includes fragmented digits on display, or LED indicators that do not operate.
- If the user interface display is completely blank, make sure that power is applied to the refrigerator. Disconnect user interface connector P1, and measure the voltage across the RD/YL and BK/YL wires from the core control board. If 14 vdc is not present, replace the core control board.
- Make sure that the ribbon cables at P4 and P5 on the user interface board are properly connected.



13. MOISTURE PRESENT IN DISPENSER AREA

- The following diagnostics procedure examines a moisture-related issue that may be caused by the dispenser housing heater not operating correctly.
- Make sure that the ice door closes fully each time it is used.

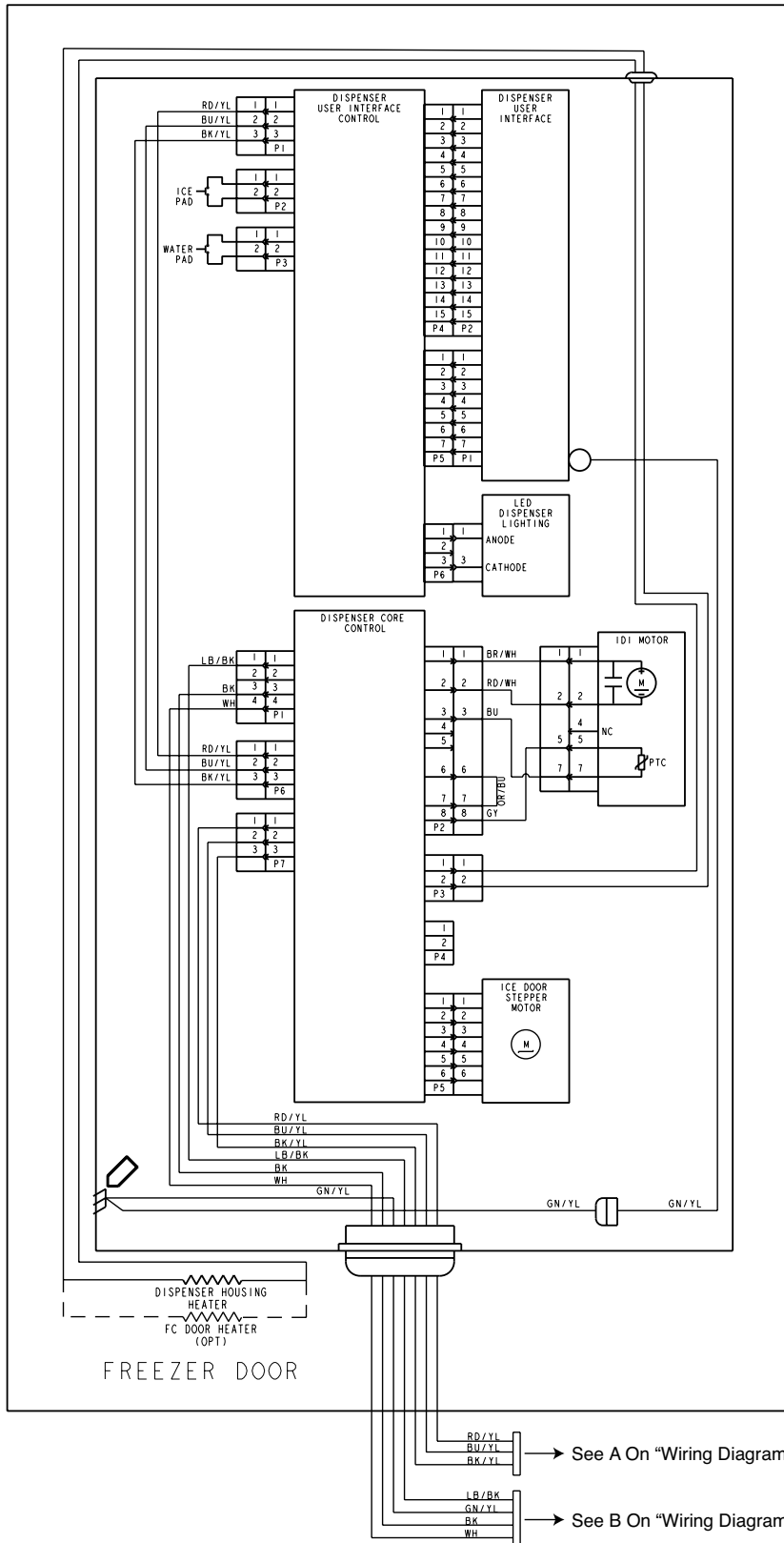


— NOTES —

WIRING DIAGRAMS

WHIRLPOOL MODELS

WIRING DIAGRAM 1



Color Code:

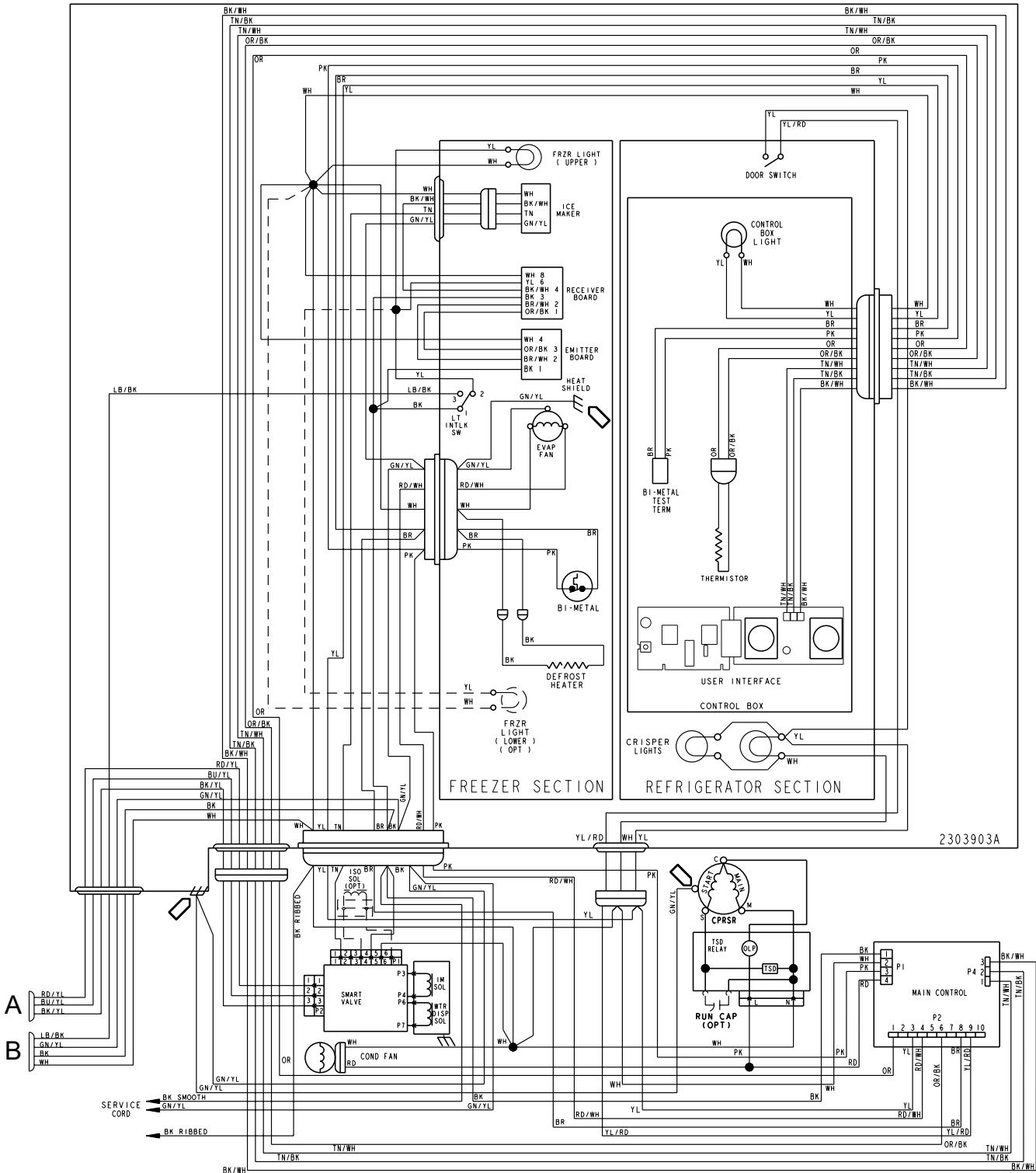
WIRE COLOR CODE

WH/GN = WHITE/GREEN TRACER
 OR/BK = ORANGE/BLACK TRACER
 YL/RD = YELLOW/RED TRACER
 BU/BK = BLUE/BLACK TRACER
 WH/BU = WHITE/BLUE TRACER
 BK/YL = BLACK/YELLOW TRACER
 WH/RD = WHITE/RED TRACER
 GN/YL = GREEN/YELLOW TRACER
 BK/WH = BLACK/WHITE TRACER
 YL/BK = YELLOW/BLACK TRACER
 PK/BK = PINK/BLACK TRACER
 BR/WH = BROWN/WHITE TRACER
 OR/BU = ORANGE/BLUE TRACER
 RD/WH = RED/WHITE TRACER
 LB/BK = LIGHT BLUE/BLACK TRACER
 TN/WH = TAN/WHITE TRACER
 TN/BK = TAN/BLACK TRACER
 RD/YL = RED/YELLOW TRACER
 BU/YL = BLUE/YELLOW TRACER
 V/WH = VIOLET/WHITE TRACER

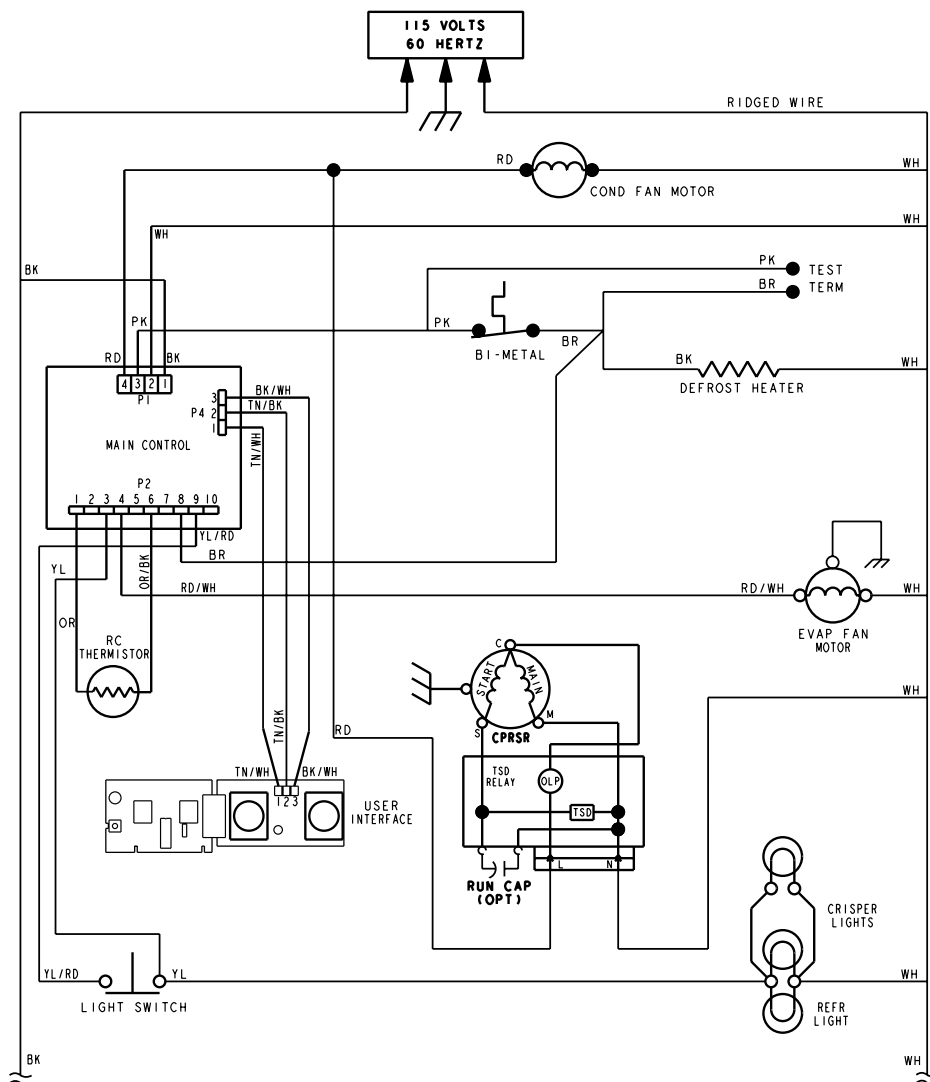
WIRE COLOR COD

BU = BLUE
 BK = BLACK
 RD = RED
 WH = WHITE
 YL = YELLOW
 OR = ORANGE
 BR = BROWN
 GY = GRAY
 PK = PINK
 V = VIOLET
 TN = TAN

WIRING DIAGRAM 2



SCHEMATIC DIAGRAM 1



Color Code:

WIRE COLOR CODE
 WH/GN = WHITE/GREEN TRACER
 OR/BK = ORANGE/BLACK TRACER
 YL/RD = YELLOW/RED TRACER
 BU/BK = BLUE/BLACK TRACER
 WH/BU = WHITE/BLUE TRACER
 BK/YL = BLACK/YELLOW TRACER
 WH/RD = WHITE/RED TRACER
 GN/YL = GREEN/YELLOW TRACER
 BK/WH = BLACK/WHITE TRACER
 YL/BK = YELLOW/BLACK TRACER
 PK/BK = PINK/BLACK TRACER
 BR/WH = BROWN/WHITE TRACER
 OR/BU = ORANGE/BLUE TRACER
 RD/WH = RED/WHITE TRACER
 LB/BK = LIGHT BLUE/BLACK TRACER
 TN/WH = TAN/WHITE TRACER
 TN/BK = TAN/BLACK TRACER
 RD/YL = RED/YELLOW TRACER
 BU/YL = BLUE/YELLOW TRACER
 V/WH = VIOLET/WHITE TRACER

WIRE COLOR CODE
 BU = BLUE
 BK = BLACK
 RD = RED
 WH = WHITE
 YL = YELLOW
 BR = BROWN
 GY = GRAY
 PK = PINK
 V = VIOLET
 TN = TAN

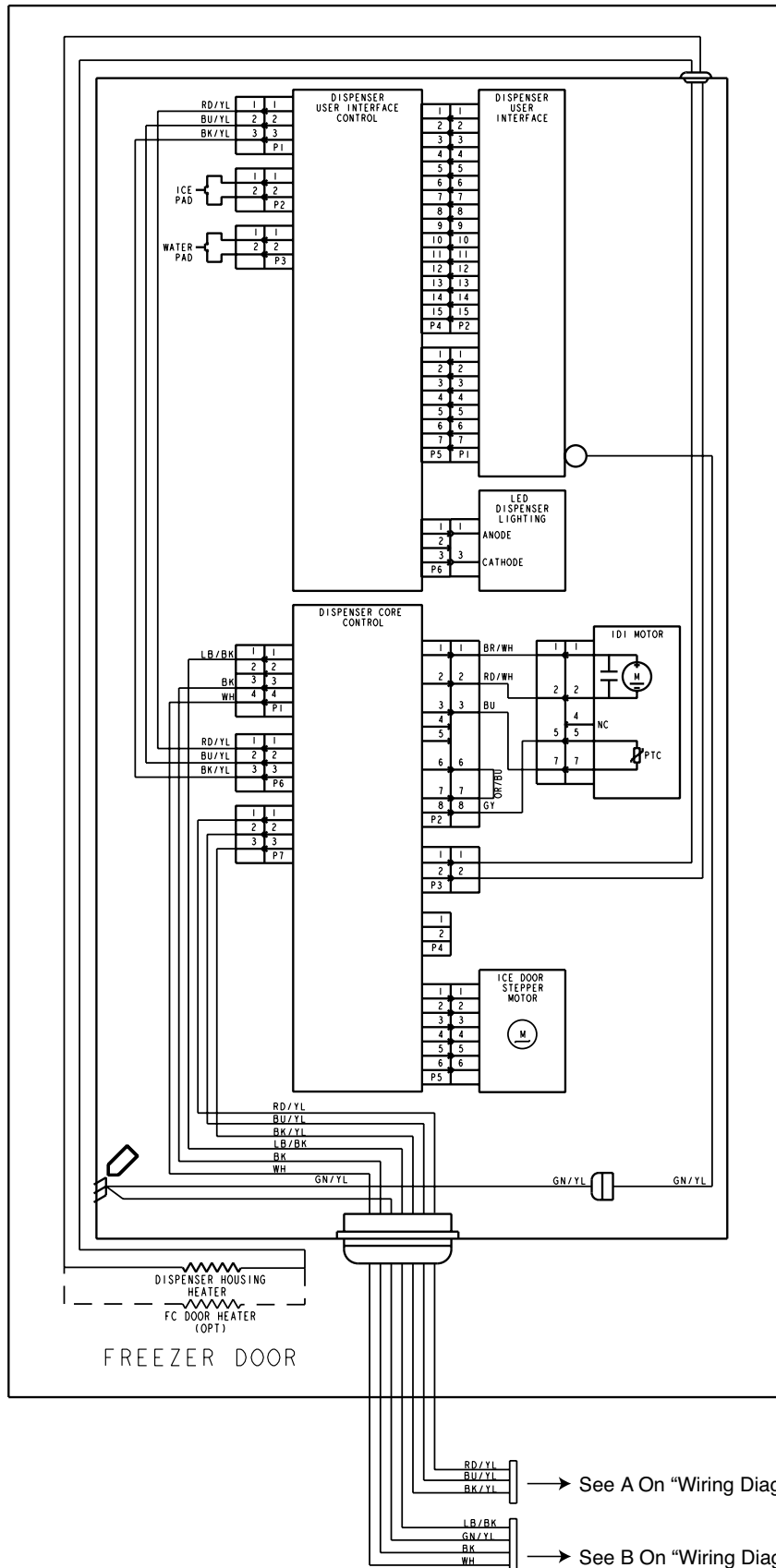
The diagram illustrates the electrical architecture of a vending machine. Key components include:

- FC DOOR INTERLOCK SWITCH**: Controls door open/closed status.
- FREEZER LIGHT UPPER / LOWER (OPT.)**: Controlled by YL wire.
- DISPENSER CORE CONTROL**: Central unit managing dispenser functions.
- ID1 MOTOR**: Motor for the main dispenser mechanism.
- PTC**: Positive Temperature Coefficient heating element.
- DISPENSER HOUSING HEATER (OPT.)**: Optional heater for the dispenser housing.
- ICE DOOR STEPPER MOTOR**: Motor for the ice door mechanism.
- SMART VALVE**: Controls water flow to the ice maker and dispenser valve.
- ISOLATION VALVE SOLENOID (OPT.)**: Optional solenoid for isolation valve control.
- MODULAR ICE MAKER**: Unit responsible for producing ice.
- RECEIVER**: Receives signals from the emitter.
- EMITTER**: Sends signals to the receiver.

Wiring is indicated by colored lines connecting specific terminals on each component's connector block. Grounding points are also shown throughout the system.

KITCHENAID MODELS

WIRING DIAGRAM 1

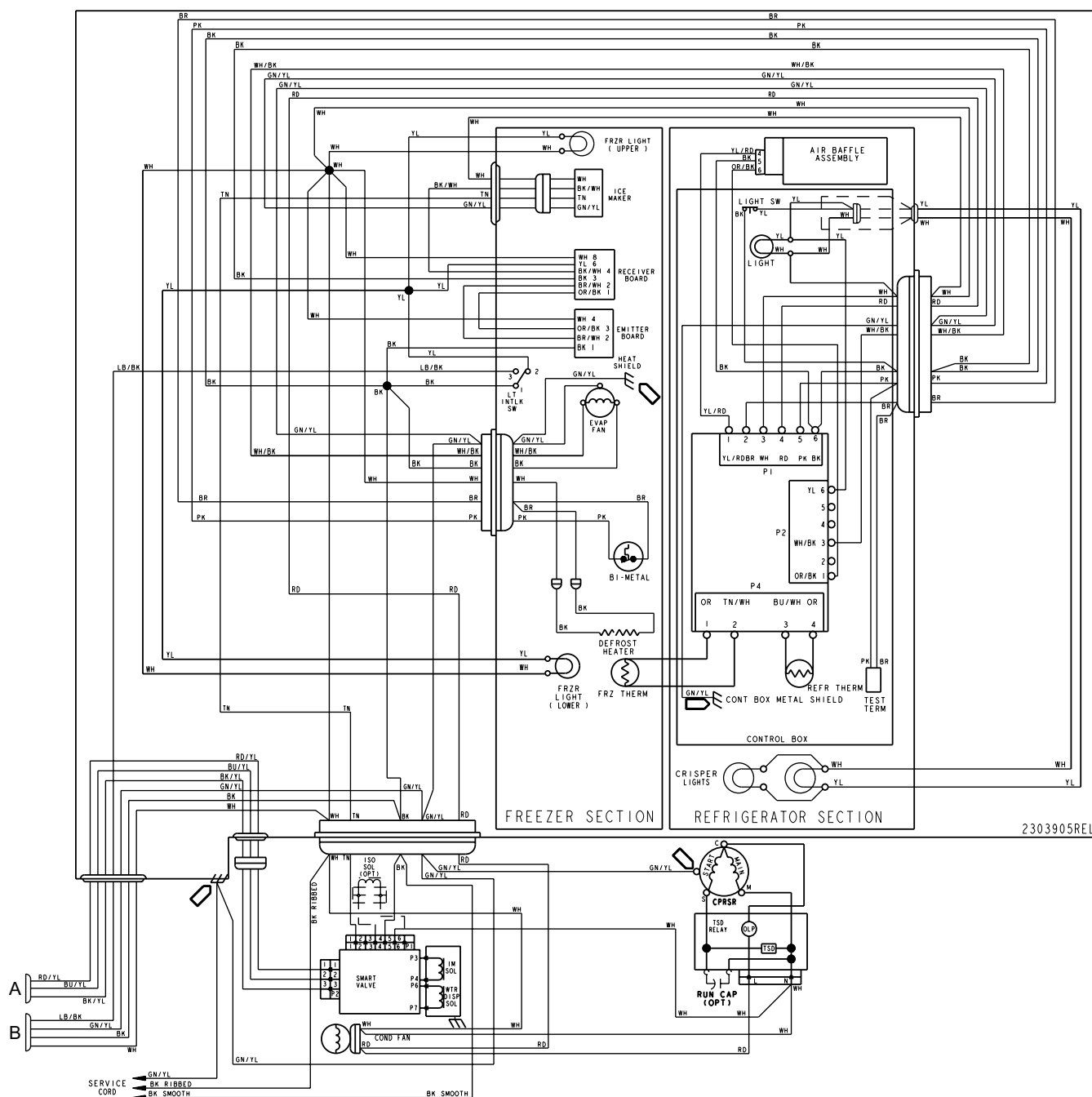


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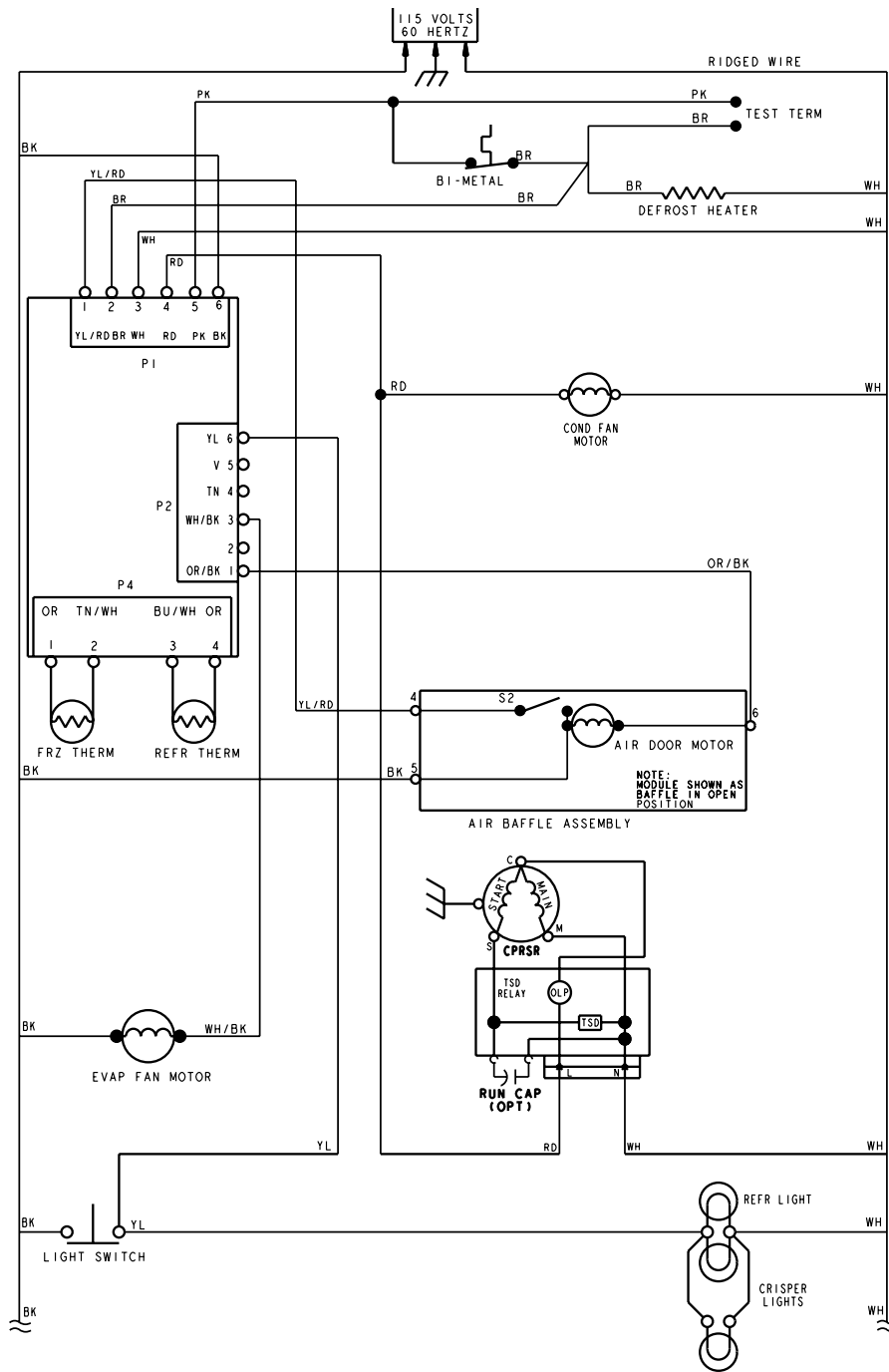
WIRE COLOR CODE
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 BK/WH : BLACK/WHITE TRACER
 YL/BK : YELLOW/BLACK TRACER
 PK/BK : PINK/BLACK TRACER
 BR/WH : BROWN/WHITE TRACER
 OR/BU : ORANGE/BLUE TRACER
 RD/WH : RED/WHITE TRACER
 LB/BK : LIGHT BLUE/BLACK TRACER
 TN/WH : TAN/WHITE TRACER
 BU/WH : BLUE/WHITE TRACER
 WH/BK : WHITE/BLACK TRACER
 RD/YL : RED/YELLOW TRACER
 BU/YL : BLUE/YELLOW TRACER
 V/WH : VIOLET/WHITE TRACER

WIRE COLOR CODE
 BU = BLUE
 BK = BLACK
 RD = RED
 WH = WHITE
 YL = YELLOW
 OR = ORANGE
 BR = BROWN
 GY = GRAY
 PK = PINK
 V = VIOLET
 TN = TAN

WIRING DIAGRAM 2



SCHEMATIC DIAGRAM 1



Color Code:

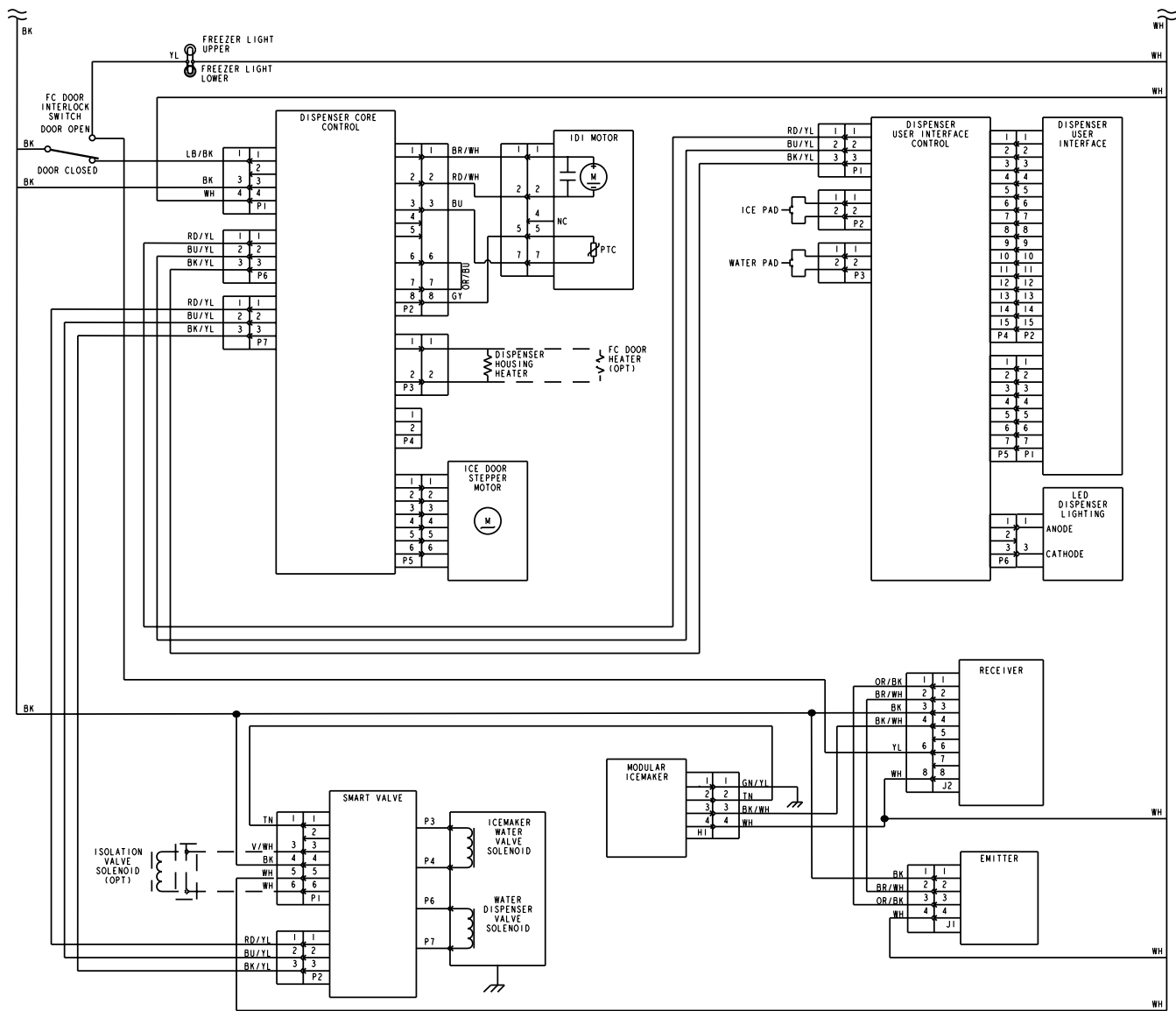
WIRE COLOR CODE

WH/GN : WHITE/GREEN TRACER
 OR/BK : ORANGE/BLACK TRACER
 YL/RD : YELLOW/RED TRACER
 BU/BK : BLUE/BLACK TRACER
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 WH/BK : WHITE/BLACK TRACER
 RD/YL : RED/YELLOW TRACER
 BU/YL : BLUE/YELLOW TRACER
 V/WH : VIOLET/WHITE TRACER

WIRE COLOR CODE

BU = BLUE
 BK = BLACK
 RD = RED
 WH = WHITE
 YL = YELLOW
 OR = ORANGE
 BR = BROWN
 GY = GRAY
 V = VIOLET
 TN = TAN

SCHEMATIC DIAGRAM 2



PRODUCT SPECIFICATIONS AND WARRANTY INFORMATION SOURCES

IN THE UNITED STATES:

FOR PRODUCT SPECIFICATIONS AND WARRANTY INFORMATION CALL:

FOR WHIRLPOOL PRODUCTS: 1-800-253-1301

FOR KITCHENAID PRODUCTS: 1-800-422-1230

FOR ROPER PRODUCTS: 1-800-447-6737

FOR TECHNICAL ASSISTANCE WHILE AT THE CUSTOMER'S HOME CALL:

THE TECHNICAL ASSISTANCE LINE: 1-800-253-2870

**HAVE YOUR STORE NUMBER READY TO IDENTIFY YOU AS AN
AUTHORIZED SERVICER**

FOR LITERATURE ORDERS:

PHONE: 1-800-851-4605

FOR TECHNICAL INFORMATION AND SERVICE POINTERS:

www.servicematters.com

IN CANADA:

FOR PRODUCT SPECIFICATIONS AND WARRANTY INFORMATION CALL:

1-800-461-5681

FOR TECHNICAL ASSISTANCE WHILE AT THE CUSTOMER'S HOME CALL:

THE TECHNICAL ASSISTANCE LINE: 1-800-488-4791

**HAVE YOUR STORE NUMBER READY TO IDENTIFY YOU AS AN
AUTHORIZED SERVICER**

